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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2010-0516; FRL-9482-2]

**Approval and Promulgation of Implementation Plans; California;
2008 San Joaquin Valley PM_{2.5} Plan and 2007 State Strategy**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving in part and disapproving in part state implementation plan (SIP) revisions submitted by California to provide for attainment of the 1997 fine particulate matter (PM_{2.5}) national ambient air quality standards in the San Joaquin Valley (SJV). These SIP revisions are the SJV 2008 PM_{2.5} Plan (revised 2010 and 2011) and SJV-related provisions of the 2007 State Strategy (revised 2009 and 2011). EPA is approving the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. EPA is also granting California's request to extend the attainment deadline for the SJV to April 5, 2015 and approving commitments to measures and reductions by the SJV Unified Air Pollution Control District and the

California Air Resources Board. Finally, it is disapproving the SIP's contingency provisions and issuing a protective finding for transportation conformity determinations under 40 CFR 93.120(a)(3) for this disapproval.

DATES: The rule is effective [insert date 60 days from the date of publication in the Federal Register].

ADDRESSES: EPA has established docket number EPA-R09-OAR-2010-0516 for this action. The index to the docket is available electronically at www.regulations.gov and in hard copy at EPA Region 9, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed in the index, some may be publicly available only at the hard copy location (e.g., copyrighted material) and some may not be publicly available at either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section below.

Copies of the SIP materials are also available for inspection at the following locations:

- California Air Resources Board, 1001 I Street, Sacramento, California 95812
- San Joaquin Valley Air Pollution Control District, 1990 E. Gettysburg, Fresno, California 93726.

The SIP materials are also electronically available at:
www.valleyair.org/Air_Quality_Plans/PM_Plans.htm and
www.arb.ca.gov/planning/sip/sip.htm.

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SUPPLEMENTARY INFORMATION: Throughout this document, "we", "us"
 and "our" refer to EPA.

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- I. Summary of EPA's Proposed and Final Actions on the 2008
 State Implementation Plan for Attainment of the 1997 PM_{2.5}
 Standards in the San Joaquin Valley**

On July 13, 2011, EPA proposed to approve in part and disapprove in part California's state implementation plan (SIP) for attaining the 1997 fine particulate (PM_{2.5}) national ambient air quality standards (NAAQS) in the San Joaquin Valley (SJV). See 76 FR 41338. California developed this SIP to provide for expeditious attainment of the PM_{2.5} standards in the SJV and to meet other applicable PM_{2.5} planning requirements in Clean Air Act (CAA) section 172(c) and EPA's PM_{2.5} implementation rule.¹

In all, California has made six submittals to address the PM_{2.5} SIP planning requirements for the SJV. The two principal ones are the SJV Unified Air Pollution Control District's (SJVUAPCD or District) 2008 PM_{2.5} Plan (amended 2010 and 2011) and the California Air Resources Board's (CARB) State Strategy for California's 2007 State Implementation Plan (amended 2009 and 2011).² Together, the 2008 PM_{2.5} Plan and the 2007 State

¹ "The Clean Air Fine Particle Implementation Rule for the 1997 PM_{2.5} NAAQS," 72 FR 20586 (April 25, 2007) and codified at 40 CFR part 51, subpart Z (PM_{2.5} implementation rule).

² These SIP submittals are:

1. SJVUAPCD, *2008 PM_{2.5} Plan*, adopted on April 30, 2008 by the SJVUAPCD and on May 22, 2008 by CARB, submitted on June 30, 2008.

2. CARB, *Proposed State Strategy for California's 2007 State Implementation Plan*, as amended and adopted on September 27, 2007 by CARB, submitted on November 16, 2007.

3. CARB, *Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revisions to the SIP Reflecting Implementation of the 2007 State Strategy* (pages 11-27 only), adopted on April 24, 2009 by CARB, submitted on August 12, 2009.

Strategy present a comprehensive and innovative strategy for attaining the 1997 PM_{2.5} standards in the SJV.

In our July 2011 notice, EPA proposed multiple approval actions on the SJV 2008 PM_{2.5} SIP. First, we proposed to approve the SIP's reasonably available control measure/reasonably available control technology (RACM/RACT) demonstration, reasonable further progress (RFP) demonstration, attainment demonstration and associated air quality modeling, base year emissions inventory; air quality modeling; and motor vehicle emissions budgets.³ Second, we proposed to approve enforceable commitments by both the District and CARB to certain measures

4. SJVUAPCD, *2008 PM_{2.5} Plan Amendment to Extend the Rule 4905 Amendment Schedule*, adopted on June 17, 2010 by the SJVUAPCD, submitted on September 15, 2010

5. CARB, *Progress Report on Implementation of PM_{2.5} State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions* (Appendices B, C and D only), adopted on April 28, 2011 by CARB, submitted on May 18, 2011. "2011 Progress Report"

6. CARB, *8-Hour Ozone State Implementation Plan Revisions and Technical Revisions to the PM_{2.5} State Implementation Plan Transportation Conformity Budgets for the South Coast and San Joaquin Valley Air Basins*, adopted on July 21, 2011 by CARB and submitted on July 29, 2011. ("2011 Ozone SIP Revisions") Only the PM_{2.5} motor vehicle emissions budgets in this submittal are addressed in today's action.

³ The 2011 Progress Report contained budgets that were not approvable because they included emissions reductions from a rule that was ineligible for SIP credit. These budgets also included data entry errors. See 76 FR 41338, 41360. We proposed instead to approve alternative budgets that CARB had developed and posted for public comment as part of its 2011 Ozone SIP Revisions and stated that the approval was contingent on our receipt of the SIP revision containing the revised budgets. *Id.* CARB submitted that SIP revision on July 29, 2011.

and specific amounts of emissions reductions. Third, we proposed to concur with the State's determination that volatile organic compounds (VOC) and ammonia are not attainment plan precursors for attainment of the 1997 PM_{2.5} NAAQS in the SJV. Lastly, we proposed to grant California's request to extend the attainment date for the San Joaquin Valley PM_{2.5} nonattainment area to April 5, 2015. See 76 FR 41338, 41361.

EPA also proposed to disapprove the contingency measures provisions of the SJV 2008 PM_{2.5} SIP for failing to provide sufficient emissions reductions.⁴ *Id.*

A more detailed discussion of each of California's SIP submittals for the SJV area, the CAA and EPA requirements applicable to them, and our evaluation and proposed actions can be found in our July 2011 proposal (76 FR 41338) and the technical support document (TSD) for this final action.⁵

⁴ We also proposed to disapprove a commitment by the District to adopt revisions to its Rule 4702 "Reciprocating Internal Combustion Engines" by December 2010 because that date had passed and the District had not adopted revisions to the rule. We stated in the proposal that we would not finalize this proposed disapproval if the District adopted revisions to the rule by the time of our final action on the SIP. See 76 FR 41338, 41361. On August 18, 2011, the District adopted the revisions to Rule 4702; therefore, we are not finalizing our proposed disapproval of this commitment.

⁵ "Technical Support Document and Response to Comments Final Rule on the San Joaquin Valley 2008 PM_{2.5} State Implementation Plan," Air Division, U.S. EPA Region 9, September 30, 2011. The TSD can be found in the docket for this rulemaking.

Our July 2011 proposal was the second time that EPA proposed action on California's SJV 2008 PM2.5 SIP. On November 30, 2010 (75 FR 74518), EPA proposed to disapprove the majority of the provisions in this SIP. During the comment period for the November 2010 proposal, we received several comment letters from the public as well as comment letters from CARB and the District. Subsequent to the close of the comment period, CARB adopted and submitted revisions to the SJV PM2.5 Plan and 2007 State Strategy. After considering information contained in the comment letters and the supplemental SIP submittals, we issued the July 2011 proposed rule which substantially amended our November 2010 proposal.

EPA is today approving most elements of the SJV 2008 PM2.5 SIP based on our conclusion that they comply with applicable CAA requirements and provides for expeditious attainment of the 1997 PM2.5 standards in the San Joaquin Valley. We are also today disapproving the SIP's contingency measure provisions because they do not provide sufficient emissions reductions. We are continuing to working with the State and District to identify additional control measures and incentive programs that meet the CAA's requirements for contingency measures consistent with EPA regulations and policy.

II. Response to Public Comments Received on the Proposals

As part of this final action, EPA has considered and provided responses to the comments submitted in response to both the November 2010 and the July 2011 proposals. Comments on our proposals were received from:

The Center on Race, Poverty & the Environment on behalf of the Association of Irrigated Residents (AIR) and other San Joaquin Valley-based environmental and community organizations. AIR submitted comments on both proposals.

Earthjustice, on behalf of Medical Advocates for Healthy Air and other San Joaquin Valley-based environmental and community organizations. Earthjustice submitted comments on both proposals.

SJVUAPCD provided comments on the November 2010 proposal.

CARB provided two comment letters on our November 2010 proposal. The first transmitted air quality modeling documentation and the second provided comments on the proposal.⁶

Tom Frantz, President, AIR, submitted comments on our November 2010 proposal.

Arthur D. Unger submitted comments on our November 2010 proposal.

⁶ The majority of CARB's and the District's comments addressed the November 2010 proposed disapprovals and EPA's grounds for them. These comments were, for the most part, addressed by our July 2011 amended proposal.

A copy of these comment letters and their attachments can be found in the docket for this final rule.

In the following sections, we summarize our responses to the most significant comments received on the proposals. Our full responses to all comments received can be found in the "Response to Comments" section (section III) of the TSD for this final rule.

A. Comments on the Proposed Action on the Emissions Inventory

Comment: Earthjustice comments on the importance of emissions inventories, noting that CAA section 172(c)(3) requires that nonattainment plans "include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area." Earthjustice objects to EPA's proposal to approve the inventories in the 2008 PM_{2.5} SIP because they were current and accurate "at the time the Plan was developed and submitted," arguing that such language is not in the CAA and is not a reasonable extension of Congress's intent, which is to ensure the adoption and approval of SIPs that will achieve clean air meeting the NAAQS. Earthjustice argues that an inventory that is "known to be wrong" undermines the modeling demonstration of the emissions reductions needed to attain, and that EPA's interpretation suggests that revisions to an inventory are needed only when it is found that the inventory is

not current or accurate as of the date it is submitted.

Earthjustice argues that such an interpretation undermines any assurance that "the requirements of [Part D of the CAA] are met." Finally, Earthjustice asserts that "EPA cannot approve these inventories as complying with the requirements of section 172(c)(3) knowing that the data are not valid for purposes of building an attainment plan."

Response: EPA does not dispute the importance of emissions inventories. We evaluated the emissions inventories in the 2008 PM2.5 Plan to determine whether they satisfy the requirements of CAA section 172(c)(3) and adequately support the Plan's RACM, RFP and attainment demonstrations. Based on this evaluation, we have concluded that the Plan's 2005 base year emissions inventory was based on the most current and accurate information available to the State and District at the time the Plan was developed and submitted and comprehensively addresses all source categories in the SJV area, consistent with applicable CAA requirements and EPA guidance. See 76 FR 41338 at 41342-41343 and 2011 Proposal TSD⁷ at section IIA; see also "General Preamble for Implementation of Title I of the Clean Air Act Amendments of

⁷ "Technical Support Document for the Revised Proposed Rulemaking Action on the San Joaquin Valley 2008 PM2.5 Plan and the San Joaquin Valley Portions of the Revised 2007 State Strategy," Air Division, U.S. EPA, Region 9, June 29, 2011, "2011 Proposal TSD."

1990," 57 FR 13498 at 13502 (April 16, 1992) ("General Preamble").

We do not agree with Earthjustice's suggestion that EPA interprets the CAA to require revisions to an emissions inventory only when it is found that such inventory is not current or accurate as of the date it is submitted. Significant changes to a base year inventory that undermine the assumptions in an attainment demonstration may, on a case by case basis, call for a reevaluation of the modeling or other planning analyses supporting that demonstration. In this case, however, as discussed in the proposed rule (76 FR 41562, 41567) and in section II.A. below, we have concluded that the State's changes to its methodologies for estimating future emissions do not significantly affect the 2002 base year inventories and, consequently, do not undermine the modeling or other analyses that rely on those inventories and that support the attainment demonstration in the Plan. Based on this technical assessment, we have concluded that it is not necessary in this case for the State to submit a revised base year inventory. We note that states are required to report comprehensive emissions inventories to EPA every three years under the Air Emissions Reporting Requirements in 40 CFR part 51, subpart A. See 40 CFR § 51.30(b).

CAA section 172(b) provides that "the State containing [a nonattainment] area shall submit a plan or plan revision (including the plan items) meeting the applicable requirements of [section 172(c) and section 110]" on the schedule established by EPA, and section 172(c) contains, *inter alia*, the requirement that nonattainment plans "shall include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area." We believe it is reasonable to read these provisions together as requiring that the State submit an inventory that is "comprehensive, accurate, [and] current" at the time the State submitted it to EPA, rather than requiring that the State continually revise its plan as new emissions data becomes available. See Brief of Respondents, EPA, in *Sierra Club, et al. v. U.S. EPA, et al.*, Case Nos. 10-71457 and 10-71458 (consolidated), May 5, 2011. States could never effectively plan for air quality improvements if they had to constantly revise their inventories as new data became available. Air quality planning is an iterative process and states and EPA must rely on the best available data at the time the plans are created.

Comment: Throughout its comments, AIR uses the term "recession reductions" which it defines as "the emissions reductions the [C]ARB claims have occurred as a result of the recession."

Response: In its comments, AIR calculates what it considers "the total reductions from baseline reductions without recession reductions" as 11 tpd of PM2.5, 195 tons per day (tpd) of nitrogen oxides (NOx), and 0.9 tpd of sulfur oxides (SOx). These figures are the same as the calculated reductions from the baseline measures prior to the updates to the 2014 baseline inventory.⁸ Based on these calculations, AIR seems to consider the "recession reductions" to be the difference between the 2014 baseline inventory submitted with the 2008 PM2.5 Plan in 2008 and the revised 2014 baseline inventory submitted with the 2011 Progress Report in 2011. By labeling this difference as "recession reductions," AIR attributes the differences entirely to revisions to the economic forecasts. This is not entirely correct.

Changes to the 2014 baseline inventory include revisions not only to the economic forecasts but also to a variety of other factors (out-of-state vehicle miles traveled (VMT)

⁸ See line D on Table 7 in the November 30, 2010 proposed action on the SJV PM2.5 SIP at 75 FR 74518. On this table, the baseline NOx reductions are listed as 199.2 tpd but include 4.2 tpd of uncreditable reductions that are not included in AIR's numbers. By "baseline inventories" or "projected baseline inventories, we mean projected emissions inventories for future years that account for, among other things, the ongoing effects of economic growth and adopted emissions control requirements. A 2014 baseline inventory is important because this year is the "attainment year," the year by which all reductions needed for attainment need to be in place for the SJV. See 40 CFR 51.1007(b).

estimates, cumulative mileage, equipment populations, load factors, and hours of use, etc.) used to calculate emissions from trucks, buses, and certain off-road equipment categories. See 2011 Progress Report, Appendix E. CARB estimates that revisions to the truck inventory excluding recession impacts reduced truck emissions statewide by 10 percent from the 2014 baseline levels estimated when the Truck rule was adopted in 2008 while recession impacts reduced the baseline level by a further 7 percent. See 2010 Truck Rule ISOR, p. 19.⁹ For off-road equipment, CARB estimates that inventory changes independent of the recession were responsible for half the overall reduction in projected statewide emissions. See 2010 Off Road Rule ISOR, p. 17.¹⁰ We note that these figures are average statewide figures and not specific to the SJV.

Comment: AIR contends that in the 2011 Progress Report, CARB first claims that the reduced economic activity caused by the recession has reduced 2014 emissions levels in the SJV by 2.7 tpd of PM2.5, 63.1 tpd of NOx and 0.1 tpd of SOx. AIR further

⁹ CARB, "Staff Report: Initial State of Reasons for Proposed Rulemaking, Proposed Amendments to the Truck and Bus Regulations, The Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation," October 2010 ("2010 Truck Rule ISOR").

¹⁰ CARB Staff Report: Initial Statement of Reasons for Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, October 2010, including Appendix D1 ("2010 Off-Road Rule ISOR").

contends that CARB claims that the recession has caused current inventories of the goods movement and construction sectors to be lower than projected in the 2008 PM2.5 Plan. Finally, citing EPA's statement in the 2011 Proposal TSD about the effect of the 2007-2009 economic recession on activity levels in the State's construction and goods movement sectors, AIR asserts that accounting for the recession through inventory adjustments is improper.

Response: CARB does not claim that the recession alone has reduced the projected 2014 baseline emissions in the SJV nor did it provide the numbers cited by AIR. As discussed in the response to the preceding comment, revisions to the baseline inventory took into account not only changes to the State's economic forecasts but also updated information on out-of-state VMT estimates, cumulative mileage, equipment populations, and other data used to calculate emissions from trucks, buses, and certain off-road equipment. The emissions reduction figures that AIR ascribes to CARB are figures EPA calculated using data provided by CARB.

EPA uses the phrase "adjustments to the baseline" to refer to the difference between the 2014 baseline initially submitted in the 2008 SJV PM2.5 Plan and the recently revised 2014 baseline as submitted in the 2011 Progress Report. This

"adjustments to baseline" figure is nothing more than EPA's summary of the overall impact of both recession and non-recession related changes between the two projected inventories. EPA calculated this adjustment from summary data CARB provided in Appendix E of the 2011 Progress Report. The adjustment represents the net results of CARB's changes to its inventories rather than the changes themselves.

CARB revised its inventories for trucks and diesel off-road equipment to incorporate new and better data including new research on truck travel within California. See 2010 Truck Rule ISOR, Appendix G. These revisions were not mere adjustments to previous inventories but thorough reviews of much of the data that goes into estimating emissions from these sources. See 2010 Truck Rule ISOR, Appendix G and 2010 Off-Road Rule ISOR, Appendix D.¹¹ These inventory revisions also included review of current and future activity data (such as fuel consumption, diesel fuel sales, trucking industry tonnage reports, truck sales trends, and truck registration data) for these categories as well as economic forecasts from a number of reputable

¹¹ For an overview of these changes and their results, see the presentation to the CARB Board by CARB's Planning and Technical Support Division on November 18, 2010, entitled, "Diesel Inventory Improvements for Regulatory Development," available at <http://www.arb.ca.gov/board/books/2010/111810/10-10-9pres.pdf> and in the docket for this rule.

sources.¹² Throughout its development of these revisions, CARB held workshops seeking public review and input into its work. See 2010 Truck Rule ISOR, p. 13.

Emissions projections are a function of change in activity (growth or decline) combined with changes in the emissions rate or controls applicable to emissions sources. Projected inventories are, therefore, necessarily affected by forecasts of industrial growth, population growth, and transportation growth, among other factors.¹³ EPA guidance emphasizes the importance of developing reliable methods for estimating future source activity levels as part of the SIP planning process.¹⁴

We disagree with AIR's assertion that "EPA claims that the ARB has opted to take credit for the decrease in the inventory in the attainment demonstration as 'a line-item adjustment to the baseline inventories.'" EPA stated in the 2011 Proposal TSD

¹² See CARB, "ARB Staff Assessment of the Impact of the Economy on California Trucking Activity and Emissions 2006-2014," draft December 2009, available in the docket for this rule. Sources of economic data included California Department of Finance, California Legislative Analyst's Office, California Energy Commission, UCLA Anderson School, Beacon Economics, University of the Pacific, Congressional Budget Office, and US Energy Information Agency. *Id.* pp. 11-12.

¹³ See "Emission Projections," STAPPA/ALAPCO/EPA Emissions Inventory Improvement Project, Volume X (December 1999) at 1-1 (available at <http://www.epa.gov/ttnchie1/eiip/techreport/volume10/x01.pdf>).

¹⁴ See "Procedures for Preparing Emissions Projections," EPA Office of Air Quality Planning and Standards, EPA-450/4-91-019 (July 1991) at p. 6 and section III.

(pg. 18) that "California is reflecting these recession impacts as a line-item adjustment to the baseline inventories." This statement was incorrect and should have read that EPA (not CARB) is reflecting the recession impacts as a line-item adjustment to the baseline inventories. EPA believes this adjustment is appropriate in light of the impact of these emissions changes on the baseline. We should have also been clearer that the 2014 adjustments included the technical revisions to the inventory that are discussed on page 19 of the 2011 Proposal TSD.

Finally, we note that although AIR objects categorically to the revisions to the projected emissions inventories based on CARB's revised economic forecasts, it provides no information to refute CARB's extensive documentation of the impact of the economic recession on air pollution generating activity. It also provides no information to refute CARB's non-recession related revisions to the projected inventories.

B. Comments on the Proposed Action on the Air Quality Modeling

Comment: Earthjustice and AIR comment that CARB's emissions inventory update necessitates new attainment demonstration modeling. AIR alleges that EPA's 2011 Proposal TSD stated that updates should trigger new modeling. AIR notes EPA's statement in that TSD that the model underpredicts. In addition, AIR questions EPA's reliance on unreviewed model sensitivity results

from CARB as the basis for not requiring new modeling. Earthjustice comments that the difficulty of performing new modeling is not a valid reason for approving an erroneous attainment demonstration. It adds that EPA's method for assessing the effect of the inventory update has the "obvious flaw" that it relies on design value changes to within hundredths of a percent, starting from design values that are, according to Earthjustice, acknowledged to be erroneous.

Response: While some large emissions inventory changes might indeed necessitate new modeling, EPA does not agree that the inventory changes were large enough to substantially affect the SJV modeling conclusions, or to invalidate the SJV attainment demonstration. As EPA stated in the 2011 Proposal TSD (p. 47), ideally new modeling would be performed when an area's emissions inventory is changed. However, since the cost in time and resources of remodeling and consequent reworking of a plan is not trivial, administrative necessity requires a judgment call about when changes are large enough to merit new modeling; there is no automatic trigger. An important criterion in making this judgment is whether the changes would affect the conclusion that the plan's emissions reductions are adequate for attaining the NAAQS. Another consideration is the uncertainty inherent in modeling; although model results may be reported to several

decimal places, model performance goals for fractional bias are typically in the range of 30 percent. Plan's Regional Model Performance Analysis,¹⁵ p.12, and EPA Guidance¹⁶ Appendix B. Small changes in the emissions inventory could be in the range of the "noise" of the model. This is not to discount the importance of an accurate emissions inventory, but rather to make the point that relatively small changes in inventory estimates do not necessarily invalidate a model application. EPA finds that the 5-6 percent base year emissions decreases due to the inventory updates in this case are relatively small.

EPA did assess the effect of the emissions inventory improvements on the attainment demonstration, using a procedure described in the 2011 Proposal TSD and other supporting documents. EPA did note in the 2011 Proposal TSD (p.48) that the emissions update revealed some model bias. The model appears to be underpredicting (biased low): its emissions inputs are now known to be too high, so its predicted concentrations should have been higher, too. Model bias is an important issue that modelers address in developing the model application for a specific area and pollution episode, through testing and

¹⁵ The "Regional Model Performance Analysis" is an appendix to the 2008 PM2.5 Plan.

¹⁶ EPA "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8-Hour Ozone and PM2.5 NAAQS and Regional Haze," April 2007. ("EPA Guidance")

refinement of a model's many inputs. The bias problem is somewhat ameliorated by the use of models in a relative sense via "relative reduction factors" (RRFs), as recommended in EPA Guidance (p. 20). The various influences that lead to model underestimation in the base year would also be expected to cause underestimation in the attainment year, and these tend to cancel out in the RRF ratio calculation used to project the future effect of controls. In other words, the effect of model bias is minimized when it is accounted for at both end points, the base and attainment years. In a similar vein, EPA assessed the effect of the emissions update on the attainment demonstration, essentially by removing the bias revealed by the update from both the base year and the attainment year.¹⁷ The bias was estimated by combining the emissions changes with an estimate of model PM_{2.5} sensitivity per unit of emissions change. The effect of removing the bias by this procedure was to increase predicted attainment year annual PM_{2.5} design values by 1-2 percent. EPA finds that this is small enough to be considered within the

¹⁷ This procedure is in some ways parallel to but not the same as the RRF calculation and could be applied even if the model were not used in a relative sense. The inventory estimates the emissions reduction between the base and future years. An RRF scales the monitored design value using the relative model response to a given emissions reduction estimate, in order to account for that reduction. The procedure here scales the model's future predictions using model sensitivity, in order to account for changes in the emissions reduction estimate.

"noise" of the model and does not change the overall modeling conclusions. But even with this increase added in, the predicted concentrations meet the NAAQS. This is a quantitative showing that the emissions updates are small enough that they do not invalidate the attainment demonstration.

As described in the 2011 Proposal TSD (section II.B), EPA reviewed the development of the model application, the procedures used to develop the model inputs, model testing methods and performance statistics, and the methods used to compute RRFs and attainment year PM_{2.5} design values. EPA finds that CARB applied these methods appropriately, including to the sensitivity results and believes that these modeling inputs and RRF calculations were carried out as described by CARB. As a result, we find that the sensitivity results provide a reasonable basis for assessing the effect of the inventory update on the attainment demonstration.

EPA does not agree with Earthjustice that starting from the Plan's modeled design values and ending with small design value changes constitute flaws in the procedure for estimating the effect of the baseline inventory revisions. All modeling has uncertainty and bias including any new modeling that would be done using the updated emissions inventory estimates. Every modeling result is an approximation and is likely to contain

errors. Administrative necessity, therefore, requires a judgment call about whether such problems are substantial enough to impact regulatory decisions. Modeling experts from regulatory agencies, academia, and consulting firms were involved in developing the SJV modeling. It underwent successful diagnostic testing and performs well. EPA finds that it continues to constitute an adequate basis for the attainment demonstration.

Further, EPA believes that the original modeling is basically sound in how it portrays SJV atmospheric chemistry and transport and that results derived from model sensitivity tests are a reasonable approximation to what would result from new modeling with the updated inventory. EPA's procedure for estimating the effect of the inventory changes using model sensitivity results does make a number of assumptions: emissions changes are small enough that the model response is linear, model sensitivity is similar in the starting and ending years, and the spatial and temporal distribution of emissions is little changed with the inventory update. EPA believes that these assumptions are reasonable and that the procedure it used provides strong evidence for the attainment demonstration's validity.

As for the smallness of the design value changes resulting from the procedure, EPA does not believe this is a substantive

issue. Any procedure (even new modeling) that starts with small emissions changes will necessarily result in small design value changes. Within a small range, over which the chemistry does not shift fundamentally, ambient concentrations are approximately proportional to emissions, by the law of conservation of matter. This is not a case of an overly precise tiny number being added to a large erroneous random number, but rather of an adjustment ratio applied to a number derived from extensive data and analysis. Some intermediate steps in the calculation procedure that EPA used to evaluate the emissions inventory change did involve tenths of a percent (not hundredths as stated by the commenter), but this is largely an artifact of showing the procedure in multiple steps for comprehensibility. EPA could have done the calculation in a single step to avoid this artifact. When modeling a 10 percent change in NO_x emissions results in a design value change of 1.4 percent, a calculation using this model sensitivity result will necessarily involve fractions of 1 percent or less. In this case, the emissions inventory update involved a change in NO_x emissions of less than 10 percent, and thus, would also be expected to yield relatively small design value changes.

Comment: Earthjustice comments that a simple screening analysis cannot substitute for an unmonitored area analysis, as it is

inadequate to address the sharp ambient concentration gradients that occur in near-highway areas.

Response: EPA agrees that the simple screening analysis in the Plan as originally submitted in June 2008 is not an adequate substitute for an unmonitored area analysis (UAA) and noted this deficiency in our November 2010 proposal. See 75 FR 74518, 74530. As noted in the 2011 proposal (76 FR 41388, 41348), CARB subsequently submitted a modeling supplement that included a UAA that follows EPA Guidance. See CARB modeling supplement, p. 139.¹⁸ The UAA led to the conclusion that there would not be any NAAQS violations at locations away from monitors, and EPA has evaluated and accepted that conclusion.

As for whether the UAA itself adequately addresses the commenter's underlying concern about sharp concentration gradients, the EPA Guidance states:

"The unmonitored area analysis is intended to be the primary means for identifying high PM_{2.5} concentrations outside of traditionally monitored locations. ... Based on the monitoring guidance, we believe that an unmonitored area analysis conducted at 12 km or finer resolution is sufficient to address unmonitored PM_{2.5} for the annual

¹⁸ Letter and enclosure, John DaMassa, Chief, Modeling and Meteorology Branch; California Air Resources Board, January 28, 2011 ("CARB modeling supplement").

NAAQS. Conducting the unmonitored analysis at 4 km or finer resolution will provide an even more detailed analysis of the spatial gradients of primary PM_{2.5}, especially when evaluating violations of the 24-hr. NAAQS."

This modeling guidance recommendations are consistent with the requirements of the EPA's PM_{2.5} monitoring rules. The modeling guidance UAA spatial scale recommendations are intended to capture neighborhood scale and larger areas, since the monitoring rules do not require micro or middle scale monitors for either the annual or 24-hr PM_{2.5} standards. CARB's UAA was conducted at a resolution of 4 km, so it is more detailed than EPA's recommended approach for UAA. In addition, it is intended for areas with a large primary PM_{2.5} contribution (that is, directly emitted rather than formed chemically over time), and relying on local primary PM controls to reach attainment. EPA Guidance, p.100. By contrast, the attainment demonstration in the 2008 PM_{2.5} Plan mainly relies on area-wide control of NO_x, a PM_{2.5} precursor, rather than on control of local primary PM_{2.5}.

Comment: Earthjustice comments that air quality worsened after 2005 despite the economic downturn, so that new air quality modeling should be performed to account for this upward trend.

Response: EPA did review the evaluation of air quality progress presented in the Plan and also independently examined air

quality data. See 2011 Proposal TSD, p.6 and p.45. Air quality monitoring data is useful for a general understanding of the SJV's air quality problem, as well as for use in supplemental analyses that accompany the modeled attainment demonstration. Downward trending emissions and ambient concentrations would tend to support the conclusion that the area is on track toward attainment of the NAAQS, although evaluation of such trends should account for the particular location, time period, and air quality metric examined. In addition, overall trends may be hard to discern given the year-to-year variability of meteorology and other factors.

The Plan used the data that was available at the time it was developed, focusing on 2001-2006, for which the Plan's Weight of Evidence analysis makes a strong case for air quality progress according to several metrics, including design value concentrations, frequency of high concentrations, concentration of PM_{2.5} component species, and emissions. We conclude that these analyses adequately support the attainment demonstration. EPA also looked at a longer period, 2000-2010, and found that the slight PM_{2.5} concentration increase shown in the Plan for 2006 continued through 2008 and flattened in 2009. Although PM_{2.5} concentrations continued to improve in 2010, the Bakersfield area's annual and 24-hour PM_{2.5} design values

calculated from 2008-2010 data were the highest in the U.S. See 76 FR 41338, 41339. We note, however, that data over the longer time frame shows there has been substantial air quality progress over the past decade. See TSD, section I.B.1.

The concentration increases during 2006-2009 are not well understood but may have been partly a result of unfavorable meteorology during that time. District and CARB efforts to evaluate the effect of meteorology on air quality trends are under way. The higher values during that period do weaken the case made in the Plan's Weight of Evidence analysis, which is a supplemental analysis to the attainment demonstration itself, but are not themselves grounds for disapproving the attainment demonstration or the Plan.

Comment: Citing 40 CFR 51.1000 and 72 FR at 20600, Earthjustice asserts that attainment of the PM_{2.5} NAAQS by April 5, 2015 will require review of ambient data from 2012, 2013, and 2014.

Earthjustice also asserts that the majority of emissions reductions in the Plan are delayed until 2014 and argues that modeling ambient concentration in 2014 does not provide an accurate picture of what emissions will be in 2012 and 2013. It further states that the modeling year must be adjusted to give a more reasonable prediction of what a 3-year average concentration from 2012-2014 will be since it is this

concentration that will determine if the Valley has attained the PM2.5 standards by the attainment date. Finally, Earthjustice asserts that the fact that the majority of reductions are in 2014 violates the reasonable further progress requirement.

Response: We disagree with Earthjustice's assertion that the Plan delays the majority of emissions reductions until 2014 and therefore fails to satisfy RFP requirements. As explained in our amended proposal (76 FR 41338 at 41355-41357) and further in section II.H. of the TSD, the majority of the reductions needed for attainment occur well before 2014. The Plan's RFP demonstration shows that more than 87 percent of the NOx, 80 percent of the PM2.5 and all the SOx reductions needed for attainment will occur by 2012. See 2011 Progress Report, Appendix C, p. 1. We explain further in section II.H. of the TSD our reasons for concluding that the 2008 PM2.5 SIP provides for RFP consistent with the CAA and the PM2.5 implementation rule.¹⁹ We also explain in section II.D. our reasons for concluding that the Plan demonstrates that all control measures needed for attainment of the 1997 PM2.5 standards will be in place as expeditiously as practicable and no later than the beginning of 2014, consistent with the CAA and 40 CFR 51.1007(b) (requiring

¹⁹ Clean Air Fine Particulate Implementation Rule, 72 FR 20586 (April 25, 2007), codified at 40 CFR part 51, subpart Z "PM2.5 implementation rule."

"implementation of all control measures needed for attainment as expeditiously as practicable, but no later than the beginning of the year prior to the attainment date"). See section II.G. and II.D. of the TSD.

We also concluded that the attainment demonstration in the Plan was developed consistent with procedures in EPA's modeling guidance. In addition, to a degree the modeling procedures already reflect the expected continuing emissions decreases during the years before the attainment year. The monitored base year design value reflects an emissions decrease over the three years of 2004-2006, not just the single 2005 emissions year. The projected design value reflects a modeled change to that monitored design value, so it too is consistent with some decreases occurring over multiple years, not just the single year of 2014.

Finally, we note that Earthjustice conflates the requirements governing EPA's action on an attainment demonstration under CAA section 172(c)(1) with those governing an attainment determination under CAA section 179(c). Earthjustice appears to assume that a demonstration of attainment by April 5, 2015, requires a demonstration that the area will have air quality measurements at or below the levels of the standards three years prior to that date. This is

incorrect. An attainment determination under CAA 179(c) is a fact-based determination made after the attainment date based on air quality monitoring data.²⁰ An attainment demonstration, on the other hand, is a predictive tool for assessing what air quality will be at a future time. An attainment demonstration is based on air quality modeling showing that the projected design value of the relevant pollutant in attainment year will be at or below the level of the relevant ambient air quality standard.

See 72 FR from 20605 to 20609.

Additionally, for a PM_{2.5} nonattainment area subject only to the requirements of subpart 1 of title I, part D of the CAA, a State may demonstrate that in the attainment year, the area will have air quality such that the area could be eligible for the first of two one-year extensions allowed under CAA section 172(a)(2)(C). Under CAA section 172(a)(2)(C), an area that does not have three years of monitored data demonstrating attainment of the PM_{2.5} NAAQS but has complied with all requirements and commitments pertaining to the area in the applicable SIP, and that has no more than minimal number of exceedances of the NAAQS

²⁰ A determination of attainment of the 1997 annual PM_{2.5} standard is based on monitoring data that shows a 3-year average of annual mean PM_{2.5} concentrations of less than 15 microgram per cubic meter (μm^3), and a determination of the attainment of the 1997 24-hour PM_{2.5} standard is based on monitoring data that shows the 3-year average of 98th percentile 24-hour concentrations is less than 65 μm^3 . See 40 CFR § 50.7.

in the attainment year, may receive a one-year extension of its attainment date. If the same conditions are met in the following year, the area may receive an additional one-year extension. Should the SJV area qualify for both of these extensions, the relevant 3-year period for determining whether the area has attained the PM_{2.5} NAAQS would be 2014-2016.²¹

Comment: Earthjustice comments that given the problems it has described with the air quality modeling, the 9:1 NO_x to PM_{2.5} relative effectiveness ratio cannot be used for transportation conformity or other purposes, unless it is supported with new modeling.

Response: EPA does not agree with Earthjustice that the modeling problems are substantial enough to invalidate the 9:1 ratio for NO_x to direct PM_{2.5} emissions trading in the transportation conformity context. As discussed above, EPA believes that the modeling is basically sound, including the model's (relative) sensitivity to emissions changes. There is no established method for determining trading ratios in conformity,

²¹ EPA has long interpreted analogous provisions for ozone nonattainment areas in CAA sections 181(a)(5) and 182(c)(2) in this same manner. See Brief of Respondents, EPA, in *Sierra Club, et al. v. U.S. EPA, et al.*, Case Nos. 10-71457 and 10-71458 (consolidated), May 5, 2011; see also *Environmental Defense v. U.S. EPA*, 369 F.3d 193 (2nd Cir. 2004) (denying petition for review of EPA's approval of New York's 1-hour ozone attainment plan based on, *inter alia*, EPA's reasonable interpretation of the extension provision in CAA section 181(a)(5)).

but as discussed in the 2011 Proposal TSD (p.148), EPA finds that the model sensitivity-based method used by CARB for determining an equivalency or relative effectiveness ratio is adequate for assessing the effect of area-wide emissions changes, such as are used in conformity budgets. The method modeled "across the board" emissions changes over the entire modeling domain; emissions considered in transportation conformity are also domain-wide. Trading in other contexts could involve additional consideration of spatial and temporal variation of the emissions, and would require an additional technical demonstration by the State and evaluation by EPA. EPA is not approving the trading ratio for any other purpose than in conformity budgets.

C. Comments on the Identification of PM2.5 Attainment Plan

Precursors

Comment: Earthjustice comments that EPA should rely on the November 2010 proposal's technical demonstration that VOC should be considered a PM2.5 plan precursor and should disapprove the Plan for its failure to address control of VOC emissions. The commenter states that EPA reversed its earlier VOC finding without receiving any new credible evidence on the issue.

Response: The PM2.5 implementation rule establishes a presumption that VOC is not a PM2.5 plan precursor requiring

controls. See 40 CFR 51.1002(c)(3). This presumption may be overturned if either EPA or the State provides an appropriate technical demonstration showing that VOC emissions from sources in the State significantly contribute to PM_{2.5} concentrations in the nonattainment area. See 40 CFR 51.1002(c)(3)(i) and (ii). The preamble to the implementation rule suggests various analyses that could be part of such a demonstration, such as emissions inventory, speciation data, modeling information, or other special studies. But the preamble is not prescriptive on required technical demonstrations, and neither the preamble nor the rule defines "significantly." Under the rule, excluding VOC as an attainment plan precursor does not require a showing that VOC controls are ineffective or counterproductive. Rather, since VOC is already excluded by presumption, the lack of a clear showing that VOC controls are effective is sufficient for it to remain excluded.

For the November 2011 proposal, EPA reviewed various monitoring and modeling studies on the role of VOC as a PM_{2.5} precursor in the SJV. EPA proposed to find that these studies constitute a technical demonstration that VOC is a PM_{2.5} attainment plan precursor, and used that as a basis to propose disapproval of the Plan, which lacks VOC controls.

Earthjustice correctly notes that CARB did not submit any new study results *per se* in response to our 2010 proposal but rather reinterpretation of the same modeling studies that EPA had already examined. For the 2011 proposal, EPA reviewed and accepted several of CARB's arguments made in its VOC supplement.²² CARB noted the importance of considering simultaneous VOC and NOx reductions, a more realistic scenario than VOC-only or NOx-only reductions, given the various controls that are already in place for the ozone plan. The only study to consider simultaneous reductions found a disbenefit from VOC control, while NOx control continued to be beneficial. CARB discounted one study that had found VOC control to be beneficial by noting that it had used artificially doubled VOC emissions in order to perform reasonably well at predicting PM2.5. For another study, CARB pointed out some features of the multi-day model response to VOC reductions that are inconsistent with the photochemical VOC pathway to PM2.5 formation and that the benefits from VOC reduction were seen only at high PM2.5 concentrations that are seldom seen today.

²² Letter, James N. Goldstene, Executive Officer, CARB, to Frances Wicher, Office of Air Planning, EPA Region 9, January 28, 2011, Attachment 4, "Air Resources Board comments on U.S. EPA's November 30, 2010 proposal that VOC be considered a significant PM2.5 Precursor for the San Joaquin Valley 2008 PM2.5 State Implementation Plan (SIP)." ("CARB VOC supplement")

EPA found these arguments persuasive enough to raise questions about the efficacy of VOC controls for reducing PM_{2.5} levels in the SJV. Even setting aside the concern that VOC control could worsen PM_{2.5} concentrations in some circumstances, EPA finds that the evidence of the effectiveness of VOC controls is at this time not clear enough to overcome the presumption in the PM_{2.5} implementation rule that VOC should not be an attainment plan precursor. However, EPA also believes it is important that reductions of VOC, ammonia, and other PM_{2.5} precursors be more thoroughly explored with realistic model sensitivity and other analyses as part of future modeling efforts in the SJV.

In its comment letter, Earthjustice also included additional information in favor of VOC as a precursor. We have reviewed this information (which mainly duplicates information EPA has already reviewed) and concluded that it does not provide sufficient grounds to reverse the presumption that VOC is not a PM_{2.5} attainment plan precursor in the SJV. Our complete analysis of Earthjustice's information can be found in the response to comments section (section III.D.) of the TSD.

D. Comments on the Proposed Action on the Reasonably Available Control Measures/Reasonably Available Control Technology Demonstration

Comment: Earthjustice asserts that EPA must disapprove the Plan's RACM/RACT demonstration because many of the rules that the District and CARB rely on have not been approved as satisfying RACT requirements. Earthjustice also states that the demonstration fails to address VOC controls or to provide adequate air quality modeling documentation. Finally, Earthjustice asserts that several of the rules intended to provide the majority of NOx and PM reductions from stationary sources in the Valley were adopted with substantially weakened controls from what was anticipated during plan development and will now provide only a fraction of what is needed to bring the area into attainment by 2014.

Response: Section 172(c)(1) of the CAA requires that each attainment plan "provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology), and shall provide for attainment of the national primary ambient air quality standards." For over 30 years, EPA has consistently interpreted this provision to require that States adopt only those "reasonably available" measures necessary for expeditious attainment and to meet RFP

requirements. 40 CFR 51.1010; *see also* 44 FR 20372 (April 4, 1979) (Part D of title I of the CAA "does not require that all sources apply RACM if less than all RACM will suffice for [RFP] and attainment"); 57 FR 13498 at 13560 (April 16, 1992) ("where measures that might in fact be available for implementation in the nonattainment area could not be implemented on a schedule that would advance the date for attainment in the area, EPA would not consider it reasonable to require implementation of such measures"); "Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas," November 30, 1999 (1999 Seitz Memo) (a State may justify rejection of a measure as not "reasonably available" for that area based on technological or economic grounds); and 70 FR 71612 (November 29, 2005) at 71661 (noting that States "need adopt measures only if they are both economically and technologically feasible and will advance the attainment date or are necessary for RFP"). EPA's interpretation of section 172(c)(1) has been upheld by several courts. *See, e.g., Sierra Club v. EPA, et al.*, 294 F. 3d 155 (D.C. Cir. 2002); *Sierra Club v. EPA*, 314 F.3d 735 (5th Cir. 2002).

Under the PM_{2.5} implementation rule at 40 CFR 51.1010, a RACM demonstration must include "the list of the potential

measures considered by the State, and information and analysis sufficient to support the State's judgment that it has adopted all RACM, including RACT." 40 CFR 51.1010(a). In addition, "[p]otential measures that are reasonably available considering technical and economic feasibility must be adopted as RACM if, considered collectively, they would advance the attainment date by one year or more." As explained in the preamble to the PM2.5 implementation rule, Congress provided EPA and States broad discretion to determine what measures to include in an attainment plan, and the language in section 172(c)(1) requiring only "reasonably available" measures and implementation of these measures "as expeditiously as practicable" indicates that Congress intended for the RACT/RACM requirement to be driven by an overall requirement that the measure be "reasonable." 72 FR 20586 at 20610 (April 25, 2007). Thus, the rule of "reason" drives the decisions on what controls to apply, what should be controlled, by when emissions must be reduced, and finally, the rigor required in a State's RACT/RACM analysis. See *id.* States may, as part of a RACM analysis, consider the costs of potential control measures and whether the measures can be readily and effectively implemented without undue administrative burden. See *id.* (citing 55 FR 38327 and 66 FR 26969).

As a threshold matter, we note that VOC controls are not a required element of the RACM demonstration in the 2008 PM_{2.5} Plan because EPA agrees with the State's determination that VOCs are not attainment plan precursors for purposes of the 1997 PM_{2.5} NAAQS in the SJV area. See 76 FR at 41343 (citing 40 CFR 51.1002(c) and 51.1010) and our responses to comments on attainment plan precursors, in section II.C. above.

Second, as to air quality modeling documentation, we explain in section II.B. above in our responses to comments on the air quality modeling our reasons for concluding that the modeling in the 2008 PM_{2.5} Plan adequately supports the Plan's RACM and attainment demonstration.

Third, as to Earthjustice's assertions about RACT, we note that although CAA section 182(b)(2) requires States to implement RACT for specific types of sources in ozone nonattainment areas classified as moderate or above, there is no specific RACT control mandate for PM_{2.5} purposes that applies to specific sources in PM_{2.5} nonattainment areas. Rather, under the PM_{2.5} implementation rule, RACT and RACM are those measures that a state finds are both reasonably available and contribute to attainment as expeditiously as practicable in the specific nonattainment area. See 76 FR at 41343 (citing 40 CFR 51.1010 and 72 FR 20586 at 20612). EPA has, therefore, evaluated the

collection of reasonably available control measures that CARB and the District have adopted and submitted with the attainment demonstration in the 2008 PM_{2.5} Plan to meet the RACM/RACT requirement in CAA section 172(c)(1) and 40 CFR 51.1010. See 76 FR 41338 at 41343-41346 and 2011 Proposal TSD at section II.D.

Finally, as to the specific NO_x and PM control options that Earthjustice asserts should also be required as RACM, we have considered whether these additional control options are reasonably available for implementation in SJV considering technical and economic feasibility, and as to those measures that are potentially reasonable, whether they would be considered collectively would advance the attainment date in the SJV by one year or more. For the reasons discussed below, we conclude that the control options identified by Earthjustice are not required RACM for purposes of the 1997 PM_{2.5} NAAQS in the SJV area.

Comment: Earthjustice states that EPA should not approve Rule 4692 (Commercial Charbroiling) as RACT because there is no justification for the District's decision to exclude control requirements for under-fired charbroilers (UFC) from the rule. In support of this assertion, Earthjustice states, among other things, that: (1) SJVUAPCD had initially found certain control options for UFC units to be cost-effective and that its later revisions to these cost estimates in response to comments were

based on inappropriate criteria, such as its "10 percent of the industry's profits" test; (2) that BAAQMD's adoption of UFC control requirements in 2007 indicates that such controls are considered feasible; and (3) that SJVUAPCD's failure to control UFCs means that PM emissions reductions from this rule are reduced from more than 2 tons per day (tpd) to just 0.02 tpd.

Response: EPA recently determined that Rule 4692 satisfied applicable CAA requirements and fully approved the rule into the SJV portion of the California SIP.²³ See 76 FR 38340 (June 30, 2011) (proposed rule) and "Revisions to the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District" final rule, pre-publication notice signed September 30, 2011 (Rule 4692). As part of that action, EPA reviewed the District's evaluation of potential UFC controls and concurred with the District's conclusion that those controls are not reasonably available for implementation in the SJV area at this time, considering technological and economic feasibility (see EPA's June 9, 2011 Proposal TSD at pp. 4-5). Given EPA's

²³ As explained in our June 30, 2011 proposal to approve Rule 4692 (76 FR 38340), the specific ozone RACT requirement in CAA section 182(b)(2) does not apply to this rule because there are no Control Techniques Guideline (CTG) documents for this source category and no major sources of NO_x or VOC subject to this rule in the SJV area. See 76 FR at 38341. We therefore interpret the commenters' reference to RACT as referring to the general requirement for reasonably available control measures (including RACT for stationary sources) in CAA section 172(c)(1). See 40 CFR 51.1010.

long-standing position that States may justify rejection of certain control measures as not "reasonably available" based on economic grounds (among others), we believe that it is appropriate for the District to consider the cost of controls at sources actually located within the specific area to determine if they are economically feasible with respect to those sources. Although we do not endorse the District's use of a "10 percent of the industry's profit" test for economic feasibility, we agree with the District's conclusion that UFC controls are not economically feasible based on the facts and circumstances related to actual cost of those controls in the SJV area. For the reasons stated in our separate proposed and final rules on Rule 4692, we conclude in this final action on the 2008 PM2.5 Plan that Rule 4692 requires all RACM for charbroilers in SJV, and that the additional controls for UFC identified by Earthjustice are not required RACM for purposes of the 2008 PM2.5 Plan because they are not reasonably available considering technological and economic feasibility.

Comment: Earthjustice asserts that Rule 4103 (Open Burning) achieves far less than what was anticipated in the Plan, and that the District had inappropriately relied on the 10 percent of profits test to exempt from control the three largest source categories of NOx, PM, and VOC covered by the Rule. Earthjustice

asserts that this resulted in foregone emissions reductions of 1,030 tpy NO_x, 1,262 tpy PM_{2.5} and 1,138 tpy VOC.

Response: EPA recently determined that Rule 4103 satisfied applicable CAA requirements and fully approved the rule into the SJV portion of the California SIP. See 76 FR 40660 (July 11, 2011) (proposed rule) and "Revisions to the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District;" final rule, pre-publication notice signed September 30, 2011 (Rule 4103)). As part of that action, EPA reviewed the District's evaluation of the postponements of certain burning prohibitions for certain agricultural crop categories and concurred with the District's conclusion that alternatives to open burning for these crop categories are not reasonably available for implementation in the SJV area at this time, considering technological and economic feasibility (see, e.g., EPA's June 2011 TSD at pp. 5-7). For the reasons stated in those separate proposed and final rules on Rule 4103, we conclude in this final action on the 2008 PM_{2.5} Plan that Rule 4103 requires all RACM for open burning in SJV, and that the additional controls identified by Earthjustice are not required RACM for purposes of the 2008 PM_{2.5} Plan because they are not reasonably available considering technological and economic feasibility.

Comment: Earthjustice stated that SJVUAPCD added a contingency provision to Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) stating that, should the Valley fail to attain the 1997 PM_{2.5} standards by the attainment date, the PM_{2.5} concentration triggering a mandatory wood burning curtailment would be lowered from 30 to 20 µg/m³. Earthjustice contends that, given the underperformance of other SJVUAPCD rules, this "contingency" should be adopted now to achieve additional reductions before the attainment date.

Response: EPA determined that Rule 4901 satisfied applicable CAA requirements and fully approved the rule into the SJV portion of the California SIP. See 74 FR 57907 (November 10, 2009). As part of that action, EPA reviewed the District's evaluation of available controls and concluded that Rule 4901 requires implementation of Best Available Control Measures under CAA section 189(b) for particulate matter of 10 microns or less (PM-10) in the SJV area. This conclusion was based in part on our finding that SJV's 30 µg/m³ threshold for mandatory wood burning curtailment is more stringent than the 35 µg/m³ threshold adopted in other areas such as Sacramento, South Coast and Bay Area. See SJVUAPCD, "Final Draft Staff Report, Proposed Amendments to Rule 4901 "Wood Burning Fireplaces and Wood Burning Heaters," October 16, 2008, at pp. 5-6.

Earthjustice has provided no information to support an argument that reducing the threshold for mandatory wood burning curtailment in the SJV from 30 to 20 $\mu\text{g}/\text{m}^3$ is a "reasonably available" control measure, nor any information to support an argument that such a measure would, individually or in combination with other reasonable measures, advance attainment of the 1997 PM_{2.5} standards in the SJV by at least a year. We have, nonetheless, evaluated in the section entitled "Evaluation of potential to advance attainment" below the additional PM emissions reductions that could be achieved by implementing a mandatory wood burning curtailment at a 20 $\mu\text{g}/\text{m}^3$ threshold (1.6 tons per winter average day, see 76 FR at 41358) to determine whether this measure could, in combination with other potentially reasonable measures, advance attainment in the SJV area.

Comment: Earthjustice asserts that the exemption in Rule 4354 (Glass Melting Furnaces) for furnaces that actually emit less than 8 tons per year of NO_x or VOC (but are located at major sources) is "illegal" because the CAA requires that RACT be implemented for all major sources. Earthjustice states that this exemption cost the Valley 1.6 tons per day of SO_x reductions and 2.9 tons per day of PM reductions. Earthjustice also states that the District had adopted a previous version of Rule 4354 that

had earlier compliance deadlines than the version EPA ultimately approved into the SIP. Earthjustice asserts that the District should have removed the exemption for small furnaces at large facilities and should not have delayed compliance requirements, and that "it is unacceptable for the District to forego any emissions reductions in the years leading up to attainment."

Response: EPA recently determined that Rule 4354 satisfied applicable CAA requirements and fully approved the rule into the SJV portion of the California SIP.²⁴ See 76 FR 53640 (August 29, 2011). As part of that action, we determined that the VOC and NOx emission limits in Rule 4354 meet the CAA section 182(b)(2) and (f) RACT requirements for major sources of VOC and NOx. The compliance schedule for NOx and VOC limits in the SIP-approved rule requires implementation of all technologically and economically feasible controls by January 2014. See SJVUAPCD, Final Draft Staff Report, "Proposed Amendments to Rule 4354 (Glass Melting Furnaces)," August 19, 2010, at pp. 10-12. We conclude, therefore, that this rule implements all VOC and NOx

²⁴ As explained in our June 30, 2011 proposal to approve Rule 4692 (76 FR 38340), the specific ozone RACT requirement in CAA section 182(b)(2) does not apply to this rule because there are no Control Techniques Guideline (CTG) documents for this source category and no major sources of NOx or VOC subject to this rule in the SJV area. See 76 FR at 38341. We therefore interpret the commenters' reference to RACT as referring to the general requirement for reasonably available control measures (including RACT for stationary sources) in CAA section 172(c)(1). See 40 CFR 51.1010.

controls that are reasonably available for this source category in the SJV. We did not fully evaluate in that action the stringency of the rule's requirements for SOx and PM10 emissions, as there is no specific RACT control mandate for SOx or PM10 purposes that necessarily applies to sources covered by this rule.²⁵ We disagree with Earthjustice's assertion that the exemption from the SOx and PM10 limits for certain furnaces that actually emit less than 8 tpy of VOC or NOx (see Rule 4354, section 4.3) is "illegal," as the CAA does not establish a specific RACT control mandate for major sources of SOx or PM10. Under CAA section 172(c)(1), however, the State/District are required to adopt all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet RFP requirements. 40 CFR 51.1010. Given the need for substantial NOx and PM2.5 emissions reductions in the SJV to meet both the 1997 PM2.5 standards and the more stringent 2006 PM2.5 standard by the applicable attainment dates, we encourage the SJVUAPCD to reevaluate the PM10 control requirements in Rule 4354 and to adopt, as expeditiously as practicable, any additional PM10 and PM2.5 control requirements that are reasonably available for

²⁵ The CAA requires implementation of RACT at any major source of NOx or VOC in ozone nonattainment areas classified as moderate or above (see CAA 182(b)(2)(C) and 182(f)) but does not contain such a major source RACT control mandate for SOx or PM purposes.

implementation in the Valley. For purposes of the 2008 PM_{2.5} Plan, additional PM control requirements for glass melting facilities may, upon SIP approval, be credited toward the District's remaining enforceable commitments. See 76 FR at 41354, Table 8.

Earthjustice asserts that the exemption in Rule 4354 for furnaces emitting less than 8 tpy of NO_x or VOC cost the Valley 1.6 tons per day of SO_x reductions and 2.9 tons per day of PM reductions. For purposes of the 2008 PM_{2.5} Plan, the foregone SO_x emissions reductions do not affect the RACM and attainment demonstration because SJV has exceeded its target level of SO_x reductions needed for attainment. See 76 FR at 41354, Table 8. As to PM, we have evaluated the additional emissions reductions that Earthjustice claims could have been achieved from glass melting facilities²⁶ in our evaluation below of the potential for such additional controls, in combination with other potential control options, to advance attainment of the 1997 PM_{2.5} standards in the SJV. See section "Evaluation of potential to advance attainment" below.

Comment: Earthjustice states that EPA recently rejected all of the NO_x emission limits in Rule 4352 (Solid Fuel-Fired Boilers,

²⁶ For this assessment, we use Earthjustice's estimate of the foregone PM reductions and assume conservatively that all such PM reductions are PM_{2.5} reductions.

Steam Generators and Process Heaters) for failing to satisfy RACT and asserts that substantial NOx reductions could be achieved if the District amended this rule to meet the stringent limits in place in other areas of the Country.

Response: Earthjustice correctly notes that EPA recently disapproved all of the NOx emission limits in Rule 4352 based on our conclusion that the District had failed to adequately demonstrate that these limits satisfy CAA section 182 RACT requirements. See 75 FR 60623 (October 1, 2010). Earthjustice did not provide any specific information about additional control measures that are reasonably available, nor has it provided information about the amount of emissions reductions that might be achieved by such controls. We have, however, developed a conservative (high) estimate of the additional NOx reductions that could be achieved under this rule if the emission limits are strengthened. We developed this estimate based on the NOx emission limits in the SIP-approved version of Rule 4352, the emissions attributed in the 2008 PM2.5 plan to solid fuel-fired boilers, steam generators, and process heaters in the SJV, emissions data from existing solid fuel-fired boilers in the SJV, and technical information about available control options from EPA's 1994 Alternative Control Techniques Document for NOx Emissions from

Industrial/Commercial/Institutional Boilers, US EPA 453/R-94-022 (1994 Boiler ACT). Based on this information, we have conservatively estimated that more stringent control requirements for solid fuel-fired boilers, steam generators, and process heaters in SJV could achieve an additional 3.16 tpd of NOx reductions.²⁷

Comment: Earthjustice states that EPA's proposal fails to address the fact that the RACM/RACT analysis "does not include reasonable controls for condensable [PM2.5] emissions" and contains no discussion of such controls. Earthjustice references 40 CFR 51.1002(c) to support its assertion that "[t]he transition period allowing agencies to ignore controls on condensable emissions ended on January 1, 2011," and also quotes EPA's statement in the preamble to the PM2.5 implementation rule (72 FR at 20652) that "[w]e expect States to address the control of direct PM2.5 emissions, including condensables with any new actions taken after January 1, 2011." Earthjustice asserts that EPA must disapprove the RACM demonstration for failure to assess reasonably available controls on condensable emissions.

Response: EPA's PM2.5 implementation rule states that "[a]fter January 1, 2011, for purposes of establishing emission limits under 51.1009 and 51.1010, States must establish such limits

²⁷ Documentation of this estimate can be found in the TSD, section III.E.

taking into consideration the condensable fraction of direct PM2.5 emissions." 40 CFR 51.1002(c). Prior to this date, the rule required that nonattainment area SIPs identify and evaluate sources of PM2.5 direct emissions and PM2.5 attainment plan precursors as part of the RFP and RACM/RACT demonstrations but did not specifically require states to address condensable PM2.5. *See id.*²⁸ Because the attainment, RFP and RACM demonstrations in the 2008 PM2.5 Plan were adopted on May 22, 2008 (*see* 76 FR at 41340), California was not required to address condensable PM in establishing the emission limits contained in these demonstrations as originally submitted, or in adopting any other PM emission limits under 40 CFR sections 51.1009 and 51.1010 prior to January 1, 2011. Consistent with these requirements, EPA has evaluated the RFP and RACM demonstrations in the 2008 PM2.5 Plan and concluded that these elements of the Plan appropriately address all sources of direct PM2.5 emissions and PM2.5 attainment plan precursors (SO2 and NOx) in the SJV. *See* 76 FR 41338 at 41343.²⁹

²⁸ *See also* Letter dated April 25, 2011, from Lisa P. Jackson, EPA, to Paul Cort, Earthjustice, denying Petition for Reconsideration with respect to the deferral of the requirement to establish emission limits for condensable particulate matter (CPM) until January 1, 2011.

²⁹ In our proposed rule, we noted that the SJVUAPCD has deferred limits for CPM in its rules but that this limited deferral does not affect the Plan's RACM/RACT and expeditious attainment demonstrations. 76 FR 41338 at 41342, n. 12. We also noted that

The 2008 PM_{2.5} Plan relies on several rules regulating direct PM_{2.5} emissions as part of the PM_{2.5} control strategy (e.g., Rule 4692 (Commercial Charbroiling, adopted 9/17/09), Rule 4103 (Open Burning, adopted 4/15/10), Rule 4354 (Glass Melting Furnaces, adopted 9/16/10) and Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters, adopted 10/16/08)) as well as rules controlling NO_x and SO_x emissions. See 2011 Proposal TSD at Tables F-2, F-3, and F-4. Of the rules that control direct PM_{2.5} emissions, only two establish emission limits for particulate matter (Rule 4692 (Commercial Charbroiling) and Rule 4354 (Glass Melting Furnaces)). EPA has not yet acted on any District rule adopted or revised after January 1, 2011 that regulates direct PM_{2.5} emissions. As part of our action on any such rule, we will evaluate the emission limits in the rule to ensure that they appropriately address CPM as required by 40 CFR 51.1002(c). We note that the revised version of Rule 4692 (Commercial Charbroiling) that EPA has recently proposed to approve (see 76 FR 38340 (June 30, 2011)) requires testing in accordance with the SCAQMD Protocol, which requires measurement of both condensable and filterable PM in accordance with South

we would evaluate any PM_{2.5} rule adopted or revised by the District after January 1, 2011 to assure that it appropriately addresses CPM. See *id.*

Coast Air Quality Management District (SCAQMD) Test Method 5.1.³⁰

We also note that the SIP-approved version of Rule 4354 (Glass Melting Furnaces) requires testing for condensable PM emissions using EPA Method 202. See 76 FR 53640 (August 29, 2011).

Evaluation of potential to advance attainment

Table E-2 of our 2011 Proposal TSD indicates that to advance attainment of the 1997 PM_{2.5} standards in the SJV by one year, *i.e.*, from 2014 to 2013, the area would need an additional 15.6 tpd of NO_x reductions and an additional 3.9 tpd of direct PM_{2.5} reductions. These figures represent the difference between the 2013 "controlled inventory" and the 2014 "NO_x emissions level needed for PM_{2.5} attainment." See 2011 Proposal TSD at Table E-2 (pg. 80).³¹ The 2013 "controlled inventory" figures were based on the District's expected emissions reductions from individual measures as identified in the 2008 PM_{2.5} Plan. See

³⁰ See SCAQMD Protocol, *Determination of Particulate and Volatile Organic Compound Emissions from Restaurant Operations*, November 14, 1997 (available at [http://yosemite.epa.gov/R9/R9Testmethod.nsf/0/3D4DEB4D21AB4AAF882570AD005DFF69/\\$file/SC%20Rest%20emiss.pdf](http://yosemite.epa.gov/R9/R9Testmethod.nsf/0/3D4DEB4D21AB4AAF882570AD005DFF69/$file/SC%20Rest%20emiss.pdf)) and SCAQMD Test Method 5.1, *Determination of Particulate Matter Emissions from Stationary Sources Using a Wet Impingement Train*, March 1989 (available at <http://aqmd.gov/tao/methods/stm/stm-005-1.pdf>).

³¹ For NO_x, 15.6 tpd represents the difference between the 2013 "controlled inventory" (306.8 tpd) and the 2014 "NO_x emissions level needed for PM_{2.5} attainment" (291.2 tpd). For PM_{2.5}, 3.9 tpd represents the difference between the 2013 "controlled inventory" (67.2 tpd) and the 2014 "Direct PM_{2.5} emissions level needed for PM_{2.5} attainment" (63.3 tpd).

Plan at pp. 6-11 and 6-12 (Table 6-3).³² Following adoption of these measures, however, the District updated its estimates of the emissions reductions associated with several of these measures. See 2011 Proposal TSD at Table F-4 (pg. 91). Based on these updated estimates of the reductions associated with specific control measures, which alter the 2013 "controlled inventory" estimates, we have re-calculated the amount of PM2.5 reductions needed to advance attainment by one year as 6.4 tpd.³³

As discussed above, with respect to Rule 4692 (Charbroiling) and Rule 4103 (Open Burning), we have concluded that the additional PM emissions control options that Earthjustice identified are not reasonably available considering economic and technical feasibility. Therefore, these potential control measures are not required RACM for purposes of the 1997 PM2.5 standards in the Valley. With respect to Rule 4901 (Wood Burning), Rule 4354 (Glass Melting Furnaces), and Rule 4352 (Solid Fuel-Fired Boilers), we assume for purposes of this analysis that additional control options are reasonably

³² For example, the 2013 "controlled inventory" for PM2.5 (67.2 tpd) is the sum of the expected emissions reductions from four PM2.5 control measures identified in Table F-2. See 2011 Proposal TSD at Table E-2 (pg. 87).

³³ The updates to the PM2.5 emissions reduction estimates reduced the creditable reductions from 6.7 tpd to 4.2 tpd, which in turn increased the 2013 "controlled inventory" from 67.2 tpd to 69.7 tpd. 6.4 tpd is the difference between the updated 2013 "controlled inventory" (69.7 tpd) and the 2014 "Direct PM2.5 emissions level needed for PM2.5 attainment" (63.3 tpd).

available for implementation in the SJV. We therefore evaluate whether the emissions reductions from these additional control options would, collectively, advance attainment of the 1997 PM2.5 standards in the SJV by at least one year.

Our estimate of the total reductions of direct PM2.5 that could be achieved by the potential control options for wood burning (1.6 tpd) and glass melting furnaces (2.9 tpd) identified by Earthjustice is 4.5 tpd. As to NOx reductions, although Earthjustice did not provide any estimate of the reductions that could be achieved by more stringent requirements for solid fuel-fired boilers, steam generators, and process heaters, we have conservatively estimated that such controls could result in an additional 3.12 tpd of NOx reductions from existing emissions units in the SJV. These combined emissions reductions (4.5 tpd of direct PM2.5 and 3.12 tpd of NOx) are significantly lower than the total reductions necessary to advance attainment by one year in the SJV (6.4 tpd of direct PM2.5 and 15.6 tpd of NOx). Therefore, even assuming that additional control options for these three source categories are reasonably available for implementation in the SJV, they are not required RACM for purposes of the 1997 PM2.5 standards because they would not advance the attainment date in SJV by at least one year. See 40 CFR 51.1010(b).

Conclusion on RACM demonstration

For all of these reasons and as discussed in our proposed rule (76 FR 41338) and 2011 Proposal TSD, we conclude that the 2008 PM_{2.5} Plan includes all RACM (including RACT for stationary sources) necessary for RFP and expeditious attainment of the 1997 PM_{2.5} standards in the SJV and, therefore, satisfies the requirements of CAA section 172(c)(1) and 40 CFR 51.1010.

E. Comments on the Proposed Actions on the Control Strategy and Enforceable Commitments

1. Baseline Measures

Comment: Earthjustice and AIR assert that the baseline inventories are flawed because they include emissions reduction credit from both "waiver measures" and "non-waiver measures" adopted before December 2006 (together referred to as "baseline measures") that have not been approved into the SIP, and that the inclusion of credit for these baseline measures undermines the attainment and progress demonstrations attached to these inventories. For example, both commenters object to the inclusion of credit for CARB's anti-idling requirements in the baseline inventories because these requirements have never been submitted for SIP approval, and Earthjustice suggests that EPA should have adjusted the credit for these anti-idling requirements based on CARB's failure to enforce them. Both

commenters assert that EPA has not specifically evaluated these baseline measures to determine how they should be credited in the baseline inventories, and Earthjustice asserts that the measures upon which the attainment and progress demonstrations rely must be enforceable, creditable controls approved into the SIP subject to the CAA's anti-backsliding provisions.

In addition, based on information provided in Table 7 of the 2011 Proposal and tables F-7 and F-9 of the 2011 Proposal TSD, AIR provides its own calculations of the total amount of emissions reduction credits attributed to baseline measures and requests that EPA confirm the accuracy of AIR's calculations.

Finally, AIR asserts that these additional "non-waiver" baseline measures should also be SIP-approved:

- Heavy Duty Diesel Chip Reflash (adopted March 27, 2004);
- Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Vehicles Owned or Operated by Public Agencies and Utilities (adopted December 8, 2005);
- Solid Waste Collection Vehicle Rule (adopted September 24, 2003);
- Fork Lifts and Other Industrial Equipment (adopted May 26, 2006);
- Pesticides - Field Fumigant Limits (submitted to EPA October 12, 2009).

Response: We disagree that there is any inadequacy in the emissions projections that undermines the RACM, RFP or attainment demonstrations in the 2008 PM2.5 Plan. We explained in our 2011 proposal (76 FR 41338 at 41342, 41343) our reasons for concluding both that the 2005 base year inventory in the 2008 PM2.5 Plan is comprehensive, accurate, and current as required by CAA section 172(c)(3) and that the projected baseline inventories for 2009, 2012 and 2014 provide adequate bases for the RACM, RFP and attainment demonstrations in the Plan.

With respect to mobile source emissions, we believe that credit for emissions reductions from implementation of California mobile source rules that are subject to CAA section 209 waivers ("waiver measures") is appropriate notwithstanding the fact that such rules are not approved as part of the California SIP. In the TSD supporting our 2011 proposal, we explained why we believe such credit is appropriate. See 2011 Proposal TSD at section II.F.4.a.i. Historically, EPA has granted credit for the waiver measures because of special Congressional recognition, in establishing the waiver process in the first place, of the pioneering California motor vehicle control program and because amendments to the CAA (in 1977) expanded the flexibility granted to California in order "to

afford California the broadest possible discretion in selecting the best means to protect the health of its citizens and the public welfare" (H.R. Rep. No. 294, 95th Congr., 1st Sess. 301-2 (1977)). In allowing California to take credit for the waiver measures notwithstanding the fact that the underlying rules are not part of the California SIP, EPA treated the waiver measures similarly to the Federal motor vehicle control requirements, which EPA has always allowed States to credit in their SIPs without submitting the program as a SIP revision.

EPA's historical practice has been to give SIP credit for motor-vehicle-related waiver measures by allowing California to include motor vehicle emissions estimates made by using California's EMFAC (and its predecessors) motor vehicle emissions factor model in SIP inventories. EPA verifies the emissions reductions from motor-vehicle-related waiver measures through review and approval of EMFAC, which is updated from time to time by California to reflect updated methods and data, as well as newly-established emissions standards. (Emissions reductions from EPA's motor vehicle standards are reflected in an analogous model known as MOVES.³⁴) The 2008 PM_{2.5} Plan was developed using a version of the EMFAC model referred to as

³⁴ MOVES replaced the MOBILE model as EPA's on-road mobile source emissions estimation model for use in SIPs and conformity in 2010.

EMFAC2007, which EPA has approved for use in SIP development in California. See 73 FR 3464 (January 18, 2008). Thus, the emissions reductions that are from the California on-road "waiver measures" and that are estimated through use of EMFAC are as verifiable as are the emissions reductions relied upon by states other than California in developing their SIPs based on estimates of motor vehicle emissions made through the use of the MOVES model. All other states use the MOVES model (and prior to release of MOVES, the MOBILE model) in their baseline inventories without submitting the federal motor vehicle regulations for incorporation into their SIPs.

Similarly, emissions reductions that are from California's waiver measures for non-road engines and vehicles (e.g., agricultural, construction, lawn and garden and off-road recreation equipment) are estimated through use of CARB's OFFROAD emissions factor model.³⁵ (Emissions reductions from EPA's non-road engine and vehicle standards are reflected in an analogous model known as NONROAD). Since 1990, EPA has treated California non-road standards for which EPA has issued waivers in the same manner as California motor vehicle standards, *i.e.*, allowing credit for standards subject to the waiver process

³⁵ Information about CARB's emissions inventories for on-road and non-road mobile sources, and the EMFAC and OFFROAD models used to project changes in future inventories, is available at <http://www.arb.ca.gov/msei/msei.htm>.

without requiring submittal of the standards as part of the SIP. In so doing, EPA has treated the California non-road standards similarly to the Federal non-road standards, which are relied upon, but not included in, various SIPs. See generally 2011 Proposal TSD at section II.F.4.a.i.

CARB's EMFAC and OFFROAD models employ complex routines that predict vehicle fleet turnover by vehicle model years and include control algorithms that account for all adopted regulatory actions which, when combined with the fleet turnover algorithms, provide future baseline projections. See 2007 State Strategy, Appendix F at 7-8. For stationary sources, the California Emissions Forecasting System (CEFS) projects future emissions from stationary and area sources (in addition to aircraft and ships) using a forecasting algorithm that applies growth factors and control profiles to the base year inventory.³⁶ See *id.* at 7. The CEFS model integrates the projected inventories for both stationary and mobile sources into a single database to provide a comprehensive statewide forecast inventory, from which nonattainment area inventories are extracted for use in establishing future baseline planning

³⁶ Information on base year emissions from stationary point sources is obtained primarily from the districts, while CARB and the districts share responsibility for developing and updating information on emissions from various area source categories. See 2007 State Strategy, Appendix F at 21.

inventories. See *id.* In 2011, CARB updated the baseline emissions projections for several source categories to account for, among other things, more recent economic forecasts and improved methodologies for estimating emissions from the heavy duty truck and construction source categories. See 2011 Progress Report at Appendix E. These methodologies for projecting future emissions based on growth factors and existing Federal, State, and local controls were consistent with EPA guidance on developing projected baseline inventories. See 2011 Proposal TSD at section II.A; see also "Procedures for Preparing Emissions Projections," EPA Office of Air Quality Planning and Standards, EPA-450/4-91-019, July 1991; "Emissions Projections," STAPPA/ALAPCO/EPA Emissions Inventory Improvement Project, Volume X, December 1999 (available at <http://www.epa.gov/ttnchie1/eiip/techreport/volume10/x01.pdf>).

In sum, the 2005 base year and future projected baseline inventories in the 2008 PM_{2.5} Plan were prepared using a complex set of CARB methodologies to estimate and project emissions from stationary sources, in addition to the most recent emissions factors and models and updated activity levels for emissions associated with mobile sources, including: (1) the latest EPA-approved California motor vehicle emissions factor model (EMFAC2007) and the most recent motor vehicle activity data from

each of the metropolitan planning organizations (MPO) in the San Joaquin Valley; (2) improved methodologies for estimating emissions from specific source categories; and (3) CARB's non-road mobile source model (the OFFROAD model). See TSD Section II.A (referencing, *inter alia*, 2007 State Strategy at Appendix F) and 2011 Progress Report. EPA has approved numerous California SIPs that rely on base year and projected baseline inventories including emissions estimates derived from the EMFAC, OFFROAD, and CEFS models. See, e.g., 65 FR 6091 (February 8, 2000) (proposed rule to approve 1-hour ozone plan for South Coast) and 65 FR 18903 (April 10, 2000) (final rule); 70 FR 43663 (July 28, 2005) (proposed rule to approve PM-10 plan for South Coast and Coachella Valley) and 70 FR 69081 (November 14, 2005) (final rule); 74 FR 66916 (December 17, 2009) (direct final rule to approve ozone plan for Monterey Bay). The commenter has provided no information to support a claim that these methodologies for developing base year inventories and projecting future emissions in the SJV are inadequate to support the RACM, RFP, and attainment demonstrations in the 2008 PM_{2.5} Plan.

For all of these reasons and as discussed in our 2011 proposal (76 FR 41338 at 41342, 41343), we have concluded that the 2005 base year inventory in the 2008 PM_{2.5} Plan is a

"comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants" in the SJV area, consistent with the requirements for emissions inventories in CAA section 172(c)(3), 40 CFR 51.1008, and 40 CFR part 51, subpart A. In addition, we conclude that the projected baseline inventories for 2009, 2012 and 2014 were prepared consistent with EPA's guidance on development of emissions inventories and attainment demonstrations and, therefore, provide an adequate basis for the RACM, RFP and attainment demonstrations in the Plan. See 2011 Proposal TSD at section II.A.

As to the six specific baseline measures that CRPE asserts should be SIP-approved, we note first that the SJV 2008 PM_{2.5} SIP does not rely on credit for emissions reductions from the Pesticides regulations (Field Fumigant Limits) as those regulations address only VOC and therefore do not apply to any pollutant that is a PM_{2.5} attainment plan precursor in the SJV (PM_{2.5}, NO_x, or SO₂).

Second, both the Requirements to Reduce Idling Emissions from New and In-Use Trucks (effective November 15, 2006)³⁷ and

³⁷ EPA is currently reviewing a request from CARB for a determination as to whether certain requirements of these anti-idling rules are preempted by sections 209(a) of the CAA; certain provisions are conditions precedent pursuant to section 209(a) of the Act; certain provisions are within-the-scope of

the Fork Lifts and Other Industrial Equipment measure (adopted May 26, 2006) are pending EPA waiver determinations under CAA section 209(b) or section 209(e).³⁸ We expect that EPA will act on these requests for waivers of preemption or authorization under CAA section 209 in the near term, and that our final approval of the 2008 PM_{2.5} Plan based in part on its reliance on the emissions reductions associated with these rules is, therefore, reasonable and appropriate. If, however, EPA either denies or does not issue the State's requested waiver for any of these measures prior to the effective date of today's action, we will take appropriate remedial action to ensure that our action on the plan is fully supportable or to reconsider that action.

previous waivers and authorizations issued pursuant to sections 209(b) and 209(e) of the Act, respectively; and at least one provision requires and merits a full authorization pursuant to section 209(e) of the Act. See 75 FR 43975 (July 27, 2010). CARB estimates that the operational requirement of the anti-idling rule, which is not subject to a CAA section 209 waiver, achieves 0.2 tpd of NO_x in the SJV. See *Memorandum*, Doris Lo, Air Division, Planning Office (AIR-2); to the San Joaquin Valley PM_{2.5} Docket No. EPA-R09-OAR-2010-0516, "SIP Credit for Heavy-Duty Diesel Engine Low-NO_x Software ("Chip Reflash)"; from, September 28, 2011.

³⁸ See letter, James Goldstene, Executive Officer, CARB to Stephen L. Johnson, Administrator, EPA RE: Request for Authorization Determination Pursuant to Clean Air Act Section 209(e) for Amendments to California's Off-Road Emissions Standards Regulation for large Spark-Ignition (LSI) Engines and Fleet Requirement for In-Use LSI Forklifts and Other Industrial Equipment and California State Motor Vehicle and Nonroad Engine Pollution Control Standards; Truck Idling Requirements; Opportunity for Public Hearing and Request for Public Comment; Notice Of Opportunity For Public Hearing And Comment. 75 FR 43975 (July 27, 2010)

Third, as to the Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Vehicles Owned or Operated by Public Agencies and Utilities (adopted December 8, 2005), CARB's staff report on this measure indicates that the projected baseline inventories have attributed emissions reductions of 0.1 tpd PM_{2.5} and 0.18 tpd NO_x *statewide* to this measure. See Staff Report: Proposed Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Vehicles Owned or Operated by Public Agencies and Utilities, October 2005, at pg. 55. Assuming less than 25 percent of these reductions are attributed to the SJV area, the *de minimis* amounts of emissions reductions attributed to this measure in the 2008 PM_{2.5} SIP do not affect our evaluation of the attainment and RFP demonstrations in the 2008 PM_{2.5} SIP.

Similarly, as to the Solid Waste Collection Vehicle Rule (adopted September 24, 2003), CARB's staff report on this measure indicates that the projected baseline inventories have attributed emissions reductions of 0.17 tpd PM_{2.5} and 2.3 tpd NO_x *statewide* to this measure. See Supplemental Staff Report: Proposed Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Residential and Commercial Solid Waste Collection Vehicles, August 8, 2003, at pg. 18. Assuming less than 25 percent of these reductions are attributed to the SJV area, the

de minimis amounts of emissions reductions attributed to this measure in the 2008 PM2.5 SIP also do not affect our evaluation of the attainment and RFP demonstrations in the 2008 PM2.5 SIP.

Finally, the Heavy Duty Diesel Engine-Chip Reflash rule (adopted March 27, 2004) ("Chip Reflash" rule) was intended to ensure expeditious compliance with CARB's NOx emissions standard for heavy-duty diesel (HDD) engines by requiring installation of "Low-NOx Software." The Chip Reflash rule was invalidated in part by a California State Court, and CARB repealed the related regulations in June 2007. The emissions reduction credit attributed to Chip Reflash in CARB's baseline inventories is limited to vehicles that have been "reflashed," *i.e.*, physically installed the Low-NOx Software,³⁹ removal of which would

³⁹ The 2007 State Strategy, Appendix A, "Emissions Inventory Output Tables" documents the adjustment in the baseline that CARB made to account for Chip Reflash (or Heavy-Duty Diesel Engine Software Upgrade). As described in appendix A, CARB staff estimates that the overall benefits of the software upgrade regulation plus related actions provided approximately 38 tons per day of NOx emissions reductions statewide in year 2007. CARB also indicates that it took into account the fact that the software upgrade regulation had been invalidated by including no additional emissions reductions from chip reflash other than those that had already occurred due to compliance with the regulation (prior to invalidation by the court), voluntary upgrade programs, ongoing engine rebuilds, engines upgrades by manufacturers exempt from the regulation, and interstate trucks. CARB staff recently confirmed that the baseline adjustment for chip reflash in the 2007 State Strategy reflects emissions reduction credit only for engines that have been "reflashed". See Memorandum, Doris Lo, Air Division, Planning Office (AIR-2); to the San Joaquin Valley PM2.5 Docket No. EPA-R09-OAR-2010-

constitute a violation of the CAA and/or California state law. See the statutory anti-tampering laws in CAA section 203(a)(3) and California Vehicle Code section 27156. Thus, the NOx emissions reductions attributed to "reflashed" engines are enforceable under the CAA and/or California state law.

As to AIR's calculation of the reductions from baseline measures, AIR calculates what it considers "the total reductions from baseline reductions without recession reductions" to be 11 tpd of PM2.5, 195 tpd of NOx, and 0.9 tpd of SOx. These figures are not correct because they do not take into account CARB's recent updates to the projected 2014 inventory.

For the 2008 PM2.5 SIP, "baseline reductions" are calculated by subtracting the 2005 base year inventory from the projected 2014 pre-control-strategy inventory. As we have discussed above, CARB revised its projected 2014 inventories to incorporate not only the continuing effects of the recent economic recession but also many non-recession related changes. These revisions have resulted in a more accurate projected 2014 inventory.

As we have discussed previously, projected emissions inventories are a function in part of changes in activity. Projected inventories are, therefore, necessarily affected by

0516, "SIP Credit for Heavy-Duty Diesel Engine Low-NOx Software ("Chip Reflash")"; from, September 28, 2011.

forecasts of industrial growth, population growth, and transportation growth, among other factors. EPA guidance emphasizes the importance of developing reliable methods for estimating future source activity levels as part of the SIP planning process. We believe that CARB has done this.

2. Waiver Measures

Comment: Earthjustice and CRPE object to our proposal to grant emissions reduction credit to California's mobile source control measures that have received a waiver of preemption under CAA section 209 without first approving them into the SIP. Both commenters argue that our reliance for this proposal on the general savings clause in CAA section 193 is inappropriate for several reasons.

First, the commenters assert that CAA section 193 only saves those "formal rules, notices, or guidance documents" that are not inconsistent with the CAA. They argue that both the CAA and EPA's long-standing policies and regulations require SIPs to contain the state and local emission limitations and control measures that are necessary for attainment and RFP and to meet other CAA requirements. They assert that our position on the treatment of California's waived measures is inconsistent with this requirement. CRPE asserts that EPA has, in contrast, approved other (non-mobile source) state measures into the SIP,

e.g., the consumer products rules and fuel standards.

Earthjustice also argues that only SIP approval provides for the CAA's enforcement oversight (CAA sections 179 and 304) and anti-backsliding (CAA section 110(l) and 193) safeguards.

Second, the commenters argue that we cannot claim that our position was ratified by Congress because section 193 saves only regulations, standards, rules, notices, orders and guidance "promulgated or issued" by the Administrator and we have not identified documents promulgated or issued by EPA that establish our position here. Earthjustice further asserts that our interpretation has not been expressed through any affirmative statements and the only statements of relevant statutory interpretations are contrary to our position on California's waived measures.

Third, Earthjustice argues that there is no automatic presumption that Congress is aware of an agency's interpretations and we have not provided any evidence that Congress was aware of our interpretation regarding the SIP treatment of California's mobile source control measures. Similarly, CRPE argues that our positions that Congress must expressly disapprove of EPA's long-standing interpretation and Congressional silence equates to a ratification of EPA's interpretation are incorrect.

Finally, CRPE argues that waiver measures may not be used in attainment demonstrations because EPA makes no finding during the waiver process that the rules achieve the reductions claimed or that the measures are SIP creditable. CRPE also notes that these issues are the subject of litigation in the 9th Circuit U.S. Court of Appeals in *Sierra Club v. EPA*, Consolidated Case Nos. 10-71457 and 10-71458.

Response: We continue to believe that credit for emissions reductions from implementation of California mobile source rules that are subject to CAA section 209 waivers ("waiver measures") is appropriate notwithstanding the fact that such rules are not approved as part of the California SIP. In our 2011 proposal and the 2011 Proposal TSD, we explained why we believe such credit is appropriate. See 76 FR 41338 at 41345 and 2011 Proposal TSD at section II.F.4.a.i. Historically, EPA has granted credit for the waiver measures because of special Congressional recognition, in establishing the waiver process in the first place, of the pioneering California motor vehicle control program and because amendments to the CAA (in 1977) expanded the flexibility granted to California in order "to afford California the broadest possible discretion in selecting the best means to protect the health of its citizens and the public welfare," (H.R. Rep. No. 294, 95th Congr., 1st Sess. 301-2 (1977)). In

allowing California to take credit for the waiver measures notwithstanding the fact that the underlying rules are not part of the California SIP, EPA treated the waiver measures similarly to the Federal motor vehicle control requirements, which EPA has always allowed States to credit in their SIPs without submitting the program as a SIP revision. As we explained in the 2011 Proposal TSD (pp. 100-102), credit for Federal measures, including those that establish on-road and nonroad standards, notwithstanding their absence in the SIP, is justified by reference to CAA section 110(a)(2)(A), which establishes the following content requirements for SIPs: "... enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), ... , as may be *necessary or appropriate* to meet the applicable requirements of this chapter." (emphasis added). Federal measures are permanent, independently enforceable (by EPA and citizens), and quantifiable without regard to whether they are approved into a SIP, and thus EPA has never found such measures to be "necessary or appropriate" for inclusion in SIPs to meet the applicable requirements of the Act. Section 209 of the CAA establishes a process under which EPA allows California's waiver measures to substitute for Federal measures, and like the Federal measures

for which they substitute, EPA has historically found, and continues to find, based on considerations of permanence, enforceability, and quantifiability, that such measures are not "necessary or appropriate" for California to include in its SIP to meet the applicable requirements of the Act.

First, with respect to permanence, we note that, to maintain a waiver, CARB's on-road waiver measures can be relaxed only to a level of aggregate equivalence to the Federal Motor Vehicle Control Program (FMVCP). See section 209(b)(1). In this respect, the FMVCP acts as a partial backstop to California's on-road waiver measures (i.e., absent a waiver, the FMVCP would apply in California). Likewise, Federal nonroad vehicle and engine standards act as a partial backstop for corresponding California nonroad waiver measures. The constraints of the waiver process thus serve to limit the extent to which CARB can relax the waiver measures for which there are corresponding EPA standards, and thereby serve an anti-backsliding function similar in substance to those established for SIP revisions in CAA sections 110(1) and 193.⁴⁰ Meanwhile, the growing

⁴⁰ In addition, the commenters' concerns over the potential for relaxation by the State of the waiver measures because the underlying regulations are not subject to EPA review and approval as a SIP revision are not a practical concern for this particular plan given that the plan's horizon is very short term (next couple of years), and the on-road and nonroad vehicles that in part will determine whether the area attains the

convergence between California and EPA mobile source standards diminishes the difference in the emissions reductions reasonably attributed to the two programs and strengthens the role of the Federal program in serving as an effective backstop to the State program. In other words, with the harmonization of EPA mobile source standards with the corresponding State standards, the Federal program is becoming essentially a full backstop to most parts of the California program.

Second, as to enforceability, we note that the waiver process itself bestows enforceability onto California to enforce the on-road or nonroad standards for which EPA has issued the waiver. CARB has as long a history of enforcement of vehicle/engine emissions standards as EPA, and CARB's enforcement program is equally as rigorous as the corresponding EPA program. The history and rigor of CARB's enforcement program lends assurance to California SIP revisions that rely on the emissions reductions from CARB's rules in the same manner as EPA's mobile source enforcement program lends assurance to other state's SIPs in their reliance on emissions reductions from the FMVCP. While it is true that citizens and EPA are not authorized to enforce California waiver measures under the Clean Air Act

standard are already in operation or in dealer showrooms. There is no practical means for the State to relax the standards of vehicles already manufactured, even if the State wanted to relax the standards.

(i.e., because they are not in the SIP), citizens and EPA are authorized to enforce EPA standards in the event that vehicles operate in California without either California or EPA certification.

As to quantifiability, EPA's historical practice has been to give SIP credit for motor-vehicle-related waiver measures by allowing California to include motor vehicle emissions estimates made by using California's EMFAC (and its predecessors) motor vehicle emissions factor model in SIP inventories. EPA verifies the emissions reductions from motor-vehicle-related waiver measures through review and approval of EMFAC, which is updated from time to time by California to reflect updated methods and data, as well as newly-established emissions standards.

(Emissions reductions from EPA's motor vehicle standards are reflected in an analogous model known as MOVES.) The EMFAC model is based on the motor vehicle emissions standards for which California has received waivers from EPA but accounts for vehicle deterioration and many other factors. The motor vehicle emissions estimates themselves combine EMFAC results with vehicle activity estimates, among other considerations. See the 1982 Bay Area Air Quality Plan, and the related EPA rulemakings approving the plan (see 48 FR 5074 (February 3, 1983) for the proposed rule and 48 FR 57130 (December 28, 1983) for the final

rule) as an example of how the waiver measures have been treated historically by EPA in California SIP actions. The San Joaquin Valley plan was developed using a version of the EMFAC model referred to as EMFAC2007, which EPA has approved for use in SIP development in California. See 73 FR 3464 (January 18, 2008). Thus, the emissions reductions that are from the California on-road "waiver measures" and that are estimated through use of EMFAC are as verifiable as are the emissions reductions relied upon by states other than California in developing their SIPs based on estimates of motor vehicle emissions made through the use of the MOVES model.

Moreover, EPA's waiver review and approval process is analogous to the SIP approval process. First, CARB adopts its emissions standards following notice and comment procedures at the state level, and then submits the rules to EPA as part of its waiver request. When EPA receives new waiver requests from CARB, EPA publishes a notice of opportunity for public hearing and comment and then publishes a decision in the Federal Register following the public comment period. Once again, in substance, the process is similar to that for SIP approval and supports the argument that one hurdle (the waiver process) is all Congress intended for California standards, not two (waiver process plus SIP approval process). Second, just as SIP

revisions are not effective until approved by EPA, changes to CARB's rules (for which a waiver has been granted) are not effective until EPA grants a new waiver, unless the changes are "within the scope" of a prior waiver and no new waiver is needed. Third, both types of final actions by EPA--i.e., final actions on California requests for waivers and final actions on state submittals of SIPs and SIP revisions may be challenged under section 307(b)(1) of the CAA in the appropriate United States Court of Appeals.

In the 2011 Proposal TSD (pp. 102-103), we indicated that we believe that section 193 of the CAA, the general savings clause added by Congress in 1990, effectively ratified our long-standing practice of granting credit for the California waiver rules because Congress did not insert any language into the statute rendering EPA's treatment of California's motor vehicle standards inconsistent with the Act. Rather, Congress extended the California waiver provisions to most types of nonroad vehicles and engines, once again reflecting Congressional intent to provide California with the broadest possible discretion in selecting the best means to protect the health of its citizens and the public welfare. Requiring the waiver measures to undergo SIP review in addition to the statutory waiver process is not consistent with providing California with the broadest possible

discretion as to on-road and nonroad vehicle and engine standards, but rather, would add to the regulatory burden California faces in establishing and modifying such standards, and thus would not be consistent with Congressional intent. In short, we believe that Congress intended California's mobile source rules to undergo only one EPA review process (i.e., the waiver process), not two.

In summary, we disagree that our interpretation of CAA section 193 is fundamentally flawed. EPA has historically given SIP credit for waiver measures in our approval of attainment demonstrations and other planning requirements such as reasonable further progress and contingency measures submitted by California. We continue to believe that section 193 ratifies our long-standing practice of allowing credit for California's waiver measures notwithstanding the fact they are not approved into the SIP, and correctly reflects Congressional intent to provide California with the broadest possible discretion in the development and promulgation of on-road and nonroad vehicle and engine standards.⁴¹

⁴¹ In this regard, we disagree that we are treating the waiver measures inconsistently with other California control measures, such as consumer products and fuels rules, for the simple reason that, unlike the waiver measures, there is no history of past practice or legislative history supporting treatment of other California measures, such as consumer products rules and fuels rules, in any manner differently than is required as a general

CRPE correctly notes that EPA's treatment of California waiver measures in SIP actions is the subject of current litigation in *Sierra Club v. EPA*, Consolidated Case Nos. 10-71457 and 10-71458 (9th Circuit).

3. Enforceable Commitments

Comment: AIR argues that EPA cannot make a finding that the "recession reductions" are an "enforceable" measure within the meaning of CAA section 110(a)(2)(A) and 172(c)(6) because "recession reductions" are only voluntary behavior to reduce activity for economic reasons and nothing prevents such an increase in activity as the economy improves. Based on this argument, AIR asserts that EPA's approval of the attainment demonstration is arbitrary and capricious and not in accordance with the law. AIR asserts that CARB concedes that the reductions coming from reduced activity may change in the future.

Response: EPA is not making a finding that emissions "reductions" related to the economic recession are "enforceable" measures under CAA sections 110(a)(2)(A) and 172(c)(6). As explained in our amended proposal (76 FR 41338 at 41354-41356), we are concluding that CARB's 2011 SIP revisions, which updated the State's projected ("baseline") emissions inventories based

rule under CAA section 110(a)(2)(A), i.e., state and local measures that are relied upon for SIP purposes must be approved into the SIP.

on improved methodologies for estimating emissions and more recent growth factors, reduced the total amount of emissions reductions needed for attainment and that the control strategy in the 2008 PM_{2.5} Plan, as revised in 2011, demonstrates expeditious attainment of the 1997 PM_{2.5} NAAQS in the SJV from the revised baseline.

Section 110(a)(2)(A) of the CAA requires that each implementation plan submitted by a State include "enforceable emission limitations and other control measures, means, or techniques... as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of [the CAA]." Section 172(c)(6) contains substantively identical requirements for all nonattainment area plans. Baseline emissions inventories, however, are not "enforceable emission limitations and other control measures, means, or techniques" or "schedules and timetables for compliance" that are necessary or appropriate to meet CAA requirements. *See El Comite Para El Bienestar de Earlimart v. Warmerdam*, 539 F.3d 1062 (9th Cir. 2008) (concluding that a baseline inventory is not an enforceable "standard or limitation" as defined by the CAA and is not, therefore, an independently enforceable aspect[] of the SIP"). Rather, baseline emissions inventories provide the basis for, among

other things, the demonstrations of attainment and progress toward attainment required by CAA sections 172(c)(1) and 172(c)(2). Specifically, CAA section 172(c)(3) requires that each plan for a nonattainment area include "a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area..."). After developing this "base year" emissions inventory, States use modeling and other analyses to calculate future emissions projections and "target" emissions levels, which then inform the State's development of progress milestones and control strategies for attaining the NAAQS. See General Preamble at 13507-13510. In short, emissions inventories provide estimates of current and future emissions that, in turn, provide the starting point for the State's attainment demonstration and enforceable control strategy.

Nothing in the CAA precludes a State from revising a submitted plan to take into account revised emissions estimates and projections. All projections of future emissions-generating activity (including the original projections in the 2008 PM_{2.5} Plan that AIR would have CARB and EPA continue to use) are based on projections of population and employment and other growth factors that reflect voluntary behavior, all of which can increase or decrease as economic conditions change. However,

reliance on projections from reputable sources of economic behavior based on established methods of predicting such behavior is the historic practice for development of emissions inventories. CARB's revised projections of future emissions-generating activity are based on reputable sources, represent the most current understanding of expected economic conditions through at least 2014, and were subject to extensive public review and comment before CARB adopted its 2011 SIP revisions containing these updated projections. Given the magnitude of the economic recession's impact on emissions-generating activity in SJV and other parts of California, and the resulting impact on the State's assessment of the control strategy necessary to demonstrate attainment of the 1997 PM_{2.5} standards, we conclude that it is appropriate to take these updated emissions projections into account as part of our action on the 2008 PM_{2.5} Plan. Other than asserting generally that CARB and EPA should not rely on the revised economic data to determine the reductions needed for attainment and that future conditions may change, AIR provides no information that undermines the State's revised economic data or the related changes to the projected inventories.

We disagree with AIR's unsupported assertion that "CARB concedes that the reductions coming from reduced activity may

change in the future." CARB has stated that it will continue to track emissions trends to ensure that the 2014 emissions targets are met and maintains its commitment to adopt and implement additional control requirements, incentive programs, or other measures as appropriate to reduce emissions to the levels necessary to attain. See 2011 Progress Report, p. 4.

Moreover, as discussed above, the revisions to the 2014 baseline inventory that AIR characterizes as "recession reductions" took into account not only the State's revised economic forecasts but numerous other factors, including updated activity data and growth projections. See section II.A ("Comments on the Proposed Actions on the Emissions Inventory") above.

Comment: AIR asserts that the Plan relies on emissions reductions caused by the recent economic recession to demonstrate attainment, rather than requiring reductions from diesel trucks and other diesel equipment in 2014. Noting CARB's recent revisions to five of its in-use rules,⁴² AIR argues that these rule revisions "reduc[ed] the amount of reductions that those five in-use rules would have achieved by 2014," and that CARB has equated recession-related emissions reductions with the

⁴² These five in-use rules are CARB's Truck rule, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation, In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks Regulation, Off-Road rule), and the LSI regulation (collective "in-use rules").

reductions necessary to meet the 2014 tonnage targets. AIR asserts that the difference between the pre-recession and recession inventories in the Valley is 40 tons per day of NOx.

Response: As discussed above, CARB's revisions to the 2014 baseline inventories took into account not only the State's revised economic forecasts but numerous other factors, including updated activity data and growth projections. See section II.A above. These improvements to the emissions estimates reduced the projected 2014 emissions levels for trucks, buses and certain off-road equipment compared to the levels expected when CARB initially adopted its rules for these sources in 2007 and 2008. These revised projections, in turn, reduced the State's assessment of the amount of emissions reductions needed from these emissions sources to provide for attainment of the 1997 PM2.5 NAAQS in the SJV and allowed CARB to provide some economic relief to the affected industries.⁴³ We note that because EPA has

⁴³ To determine the extent to which it could revise its in-use rules to provide economic relief and still meet the attainment target, CARB evaluated whether the lower emissions from the revised inventories for both trucks, buses and off-road equipment, when combined with the effects of the recession, provided greater emissions reductions from the in-use rules than were initially expected. CARB referred to these greater-than-expected emissions reductions as the "emission margin." Because the in-use diesel rules reduced both direct PM2.5 and NOx and both pollutants contribute to ambient levels of PM2.5, CARB calculated the margin on a "NOx equivalent" basis and found that the margin for the SJV was 40 tpd of NOx equivalents. See 2010 Truck Rule ISOR, p. 23.

not previously approved California's in-use truck rules into the SIP, EPA's approval of these rules strengthens the SIP and meets the requirements of CAA section 110(l). See CAA 110(l) (prohibiting EPA from approving a revision of a plan "if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress . . . or any other applicable requirement of [the Act]").

Both the revised Truck rule and the revised Off-Road rule continue to require reductions from diesel trucks and other diesel equipment in 2014 and future years. See 2010 Truck Rule ISOR, p. 45 and 2010 Off-Road Equipment ISOR, p. 38; see also, 76 FR 41338, 41346 (Table 6).

Comment: AIR claims that the 2011 Progress Report shows CARB considers "recession reductions" as a part of its "global" emissions reduction commitment. In support of this claim, AIR quotes the 2011 Progress Report at page 4:

As a result of the recession, actual emissions decreases moved California closer to the emissions levels needed for attainment in 2014. The recession has reduced economic activity and emissions, most notably in the goods movement sector. This has allowed ARB to maintain the State's SIP commitments in the South Coast and San Joaquin Valley while

also providing some near-term economic relief to affected industries.

As the economy recovers, ARB will continue to track emissions trends to ensure the 2014 emissions targets are met. If future emissions were to exceed the SIP target, the State's commitment could be made up with additional controls, incentive programs, or other programs to bring emissions down to the necessary levels. A discussion of how ARB accounted for the recession is found later in this report.

Response: EPA is not treating any "recession reductions" as part of the State's enforceable commitments. As explained above, we are approving the attainment demonstration and control strategy in the 2008 PM_{2.5} Plan based on our conclusion that the Plan, as revised by CARB's 2011 revisions to the projected baseline inventories, demonstrates expeditious attainment of the PM_{2.5} standards in the SJV. EPA interprets the quoted language as a statement of CARB's future plans to revise the SIP as necessary should economic activity change significantly in the future.

Comment: AIR claims that in proposing to disapprove the CARB's global commitment in November 2010, EPA recognized that the Truck rule could reduce that percentage of reductions remaining as commitments below 10 percent. It then asserts that EPA cannot

now approve the commitment and the attainment demonstration because CARB's relaxation of the Truck rule and the Off-Road rule to delay reductions beyond 2014 mean that the percentages of PM_{2.5} and NO_x reductions needed for attainment that remain as commitments are still well above the 10 percent threshold. AIR states that based on its calculations, the percentage of total reductions remaining as commitments, if adjustments to the baseline are not included, would be 25.1 percent for PM_{2.5} and 26.7 percent for NO_x.

Response: EPA did not propose to disapprove CARB's aggregate commitments in its 2010 proposal. We proposed then and again in our 2011 proposal to approve CARB's aggregate emissions reductions commitments as described in CARB Resolution 07-28, Attachment B. See 75 FR 74518 at 74541 and 76 FR 41338 at 41361. EPA did initially propose to disapprove the attainment demonstration based in part on our finding that the percentage of the emissions reductions needed for attainment that remained as commitments was too high. See 75 FR at 74541. As explained in our 2011 proposal, however, additional submittals from CARB have reduced the percentages of emissions reductions remaining as commitments to 13.2 percent for direct PM_{2.5} and 4.5 percent for NO_x. These percentages are reasonably close to the 10 percent range that EPA has historically accepted as appropriate for

enforceable commitments in approving attainment demonstrations. See 76 FR at 41355, 41356. Because the State's revisions to the projected baseline inventories in the SJV 2008 PM2.5 SIP have reduced the total tonnage of emissions reductions necessary to attain the 1997 PM2.5 standards (see section II.A above), we disagree with AIR's calculation of the percentage of total reductions remaining as commitments.

Comment: Earthjustice comments that EPA has outlined a three-factor test to assess whether the commitments in the SJV 2008 PM2.5 SIP are reasonable but has not documented, under the first factor, how we determine the level of remaining reductions and what is meant by "reasonably close."

Response: In our 2011 proposal we provide a detailed discussion of the emissions reductions needed for attainment and how they have been or will be achieved. See generally 76 FR 41339, 41344-41347 and 41354-41357 and 2011 Proposal TSD, sections II.F. and G. These reductions include those from measures adopted prior to 2007 (baseline measures), measures adopted since 2007 and measures that are yet to be adopted (*i.e.*, enforceable commitments). The expected reductions from each of these sets of measures are provided in the 2011 proposal, as are EPA's calculations of the percentages of needed reductions remaining as commitments. See 76 FR 41338 at 41354, Table 8; see also 2011

Proposal TSD at pp. 105-106 and 113-114. As provided in the tables in our 2011 proposal and 2011 Proposal TSD, the reductions remaining as commitments are 12.9 tpd of NO_x and 3.0 tpd of PM_{2.5}. *Id.* These reductions represent 4.5 percent and 13.2 percent of the total NO_x and PM_{2.5} emissions reductions (respectively) needed for attainment. *Id.*

In support of our statement that these percentages (4.5 percent of NO_x and 13.2 percent of PM_{2.5}) are "reasonably close to the 10 percent range that EPA has historically accepted in approving attainment demonstrations," we referenced several prior EPA approvals of SIPs relying on similar enforceable commitments. See 76 FR 41339 at 41355 and n. 30. We also explained our legal rationale for approving such enforceable commitments and referenced several court decisions that support our interpretation of the CAA. See *id.* at n. 27 and 28. Based on our evaluations, we proposed to allow the State to rely on these limited enforceable commitments as part of the attainment demonstration in the 2008 PM_{2.5} Plan and 2007 State Strategy. *Id.* at 41356. Earthjustice does not explain why these explanations were not adequate or why reliance on enforceable commitments consistent with these court cases is inappropriate. Comment: Earthjustice comments that it is not reasonable to approve a "plan to make a plan," which is what they believe the

District and CARB have provided. Earthjustice states that the District and CARB are asking EPA to trust them that they will find emissions reductions needed to meet the standards by 2015. Earthjustice states that this is not what the CAA contemplates, citing section 110(a)(2)(A) of the CAA (requiring plans to include "enforceable emission limitations and other control measures ... necessary or appropriate to meet the applicable requirements of this Act"). Earthjustice states that there is no point in having a plan which does not specifically identify how it plans to accomplish the needed reductions.

Response: We disagree with Earthjustice's assertion that the 2008 PM2.5 SIP does not identify how CARB and the SJVUAPCD plan to accomplish the reductions needed for attainment of the 1997 PM2.5 standards in the SJV by 2015. As discussed in our amended proposal, the 2008 PM2.5 Plan relies principally on adopted measures approved into the SIP or given waivers under CAA section 209 rules to achieve the emissions reductions needed to attain the 1997 PM2.5 standards in the SJV by April 5, 2015, including baseline (pre-2007) measures that continue to achieve emissions reductions through 2014. See 76 FR at 41356. The balance of the needed reductions is currently in the form of enforceable commitments that account for 13.2 percent of the direct PM2.5 and 4.5 percent of the NOx emissions reductions

needed from 2005 levels to attain. *See id.* These SIP-approved or CAA-waived control measures and enforceable commitments satisfy the requirement in CAA section 110(a)(2)(A) to include “enforceable emission limitations and other control measures, means or techniques . . . as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements” of the CAA. *See id.* at 41355, n. 27. Although CARB’s and the District’s enforceable commitments to achieve additional emissions reductions are expressed in aggregate tonnages and not tied to specific measures, both CARB and the District have provided a list of potential measures that may achieve the additional reductions needed to attain the standards, together with expeditious rule development, adoption, and implementation schedules consistent with EPA’s policy on acceptable enforceable commitments. *See id.* at 41355, 41356. Both CARB and the District have also made significant progress to date in meeting their enforceable commitments. *Id.*

Comment: AIR notes that one of EPA’s criteria for evaluating an attainment demonstration that relies on commitments is whether the state is capable of fulfilling the commitment. AIR argues that CARB is not capable of fulfilling its commitment given CARB’s alleged use of “recession reductions” instead of actual measures to meet its commitment when diesel emissions can change

based on economic forces that the State cannot control. It also claims that CARB's decision to revise its five in-use rules is evidence that CARB can and likely will amend rules in the future that may undermine its commitment.

Response: We disagree with AIR's assertion that CARB's revisions to the in-use rules or to its projected emissions levels based on updated economic forecasts undermine its commitments or demonstrate that the State is not capable of fulfilling its commitment. We discussed above in section II.A our reasons for concluding that the revisions to the 2014 baseline emissions inventories are legitimate.

Contrary to AIR's assertions, CARB's rulemaking record for the revisions to its in-use rules indicate that the State intends to ensure that any future revisions to the rules will not undermine its SIP commitment. See, e.g., 2010 Truck Rule ISOR, p. 2 and 2010 Off-Road Rule ISOR, p. 2 (stating that rule revisions should "continue progress toward cleaner air" and "meet state implementation plan (SIP) commitments"). Before revising its in-use rules, CARB calculated the maximum level of relief it could provide without violating its SIP commitment. This "SIP margin" was calculated as 40 tpd in NOx equivalent (a weighted combination of NOx and PM2.5 emissions) in the SJV. See 2010 Truck Rule ISOR, p. 23 and 2010 Off-Road Rule ISOR, p. 20.

The revisions to the in-use rules did not decrease their combined benefits by more than this amount. See 2010 Truck Rule ISOR, p. 51 and 2010 Off-Road Rule ISOR, p. 43. Thus, CARB's actions did not reflect any lack of intention to fully meet its enforceable commitments to provide emissions reductions sufficient for timely attainment.

Comment: Earthjustice also contends that the second factor for determining whether to approve an attainment demonstration that relies on commitments, whether the state is capable of meeting its commitment, is not met because CARB has repeatedly fallen short of achieving its estimated emissions reduction from its rules and has not begun to develop its Agricultural Equipment Rule which was to achieve 5 to 10 tons per day of NO_x in the SJV and be adopted by 2009. To support its argument, it points to the methodology changes associated with the Truck Rule and Off-Road Rule and the "massive recession reductions" that have resulted in fewer reductions being needed from these rules. Earthjustice concludes that it does not believe that CARB is capable of meeting the "massive, last-minute commitments" relied upon in the Plan given CARB's history of avoiding satisfying its commitments. It also argues that CARB cannot rely on changes to the inventory to lessen the reductions from its rules without reassessing the relationship between emissions and ambient

concentrations of fine particulates and that the "massive recession reductions" are neither permanent nor enforceable.

Response: We disagree with Earthjustice's assertion that CARB has a history of not satisfying its commitments or that the State's recent revisions to its future emissions projections indicate it is not capable of meeting its commitments. We discussed above in section II.A. our reasons for concluding that the revisions to the 2014 baseline emissions inventories are valid. We also note that Earthjustice has provided no information or data to undermine CARB's revisions to its future emissions projections based on its revised economic forecasts and updated methodologies for estimating emissions.

In addition, Earthjustice's assertion that CARB's actions with respect to regulation of in-use agricultural equipment indicate it will not meet its enforceable commitment is unsupported. CARB recently adopted changes to its rulemaking schedule to establish an adoption date of 2013 for regulation of in-use agricultural equipment. See 2011 Ozone SIP Revisions, p. 3. The 2007 State Strategy indicates that this measure is expected to achieve 5 to 10 tpd NO_x reductions in 2017, well after the period covered by the 2008 PM_{2.5} SIP. See 2009 State Strategy Status Report, p. 18. CARB did not quantify emissions reductions for this measure for 2014. See *id.* at 16. The fact

that the State revised its adoption schedule for a measure that is not relied on for attainment or RFP in the SJV 2008 PM2.5 SIP does not establish that the State is generally incapable of meeting its enforceable commitments in that SIP. As discussed in the 2011 proposal and its TSD and in our response to comments on the air quality modeling above in section II.B., EPA has concluded as a technical matter that the revisions to the base year inventory are not significant enough to change the basic conclusions drawn from the air quality modeling or to warrant a new air quality modeling assessment at this time. See 76 FR 41338, 41349 and 2011 Proposal TSD, section II.B.

Comment: Earthjustice states that CAA sections 110(a)(2)(A) and 172(c)(6) require SIPs to contain "enforceable limitations...as may be necessary or appropriate" to achieve attainment.

Earthjustice further states that, while section 110(k)(4) allows EPA to grant "conditional approval" of a SIP lacking certain statutory elements "based on a commitment of the state to adopt specific enforceable measures" by a date certain, the statute provides that the conditional approval automatically becomes a disapproval if the state fails to comply with the commitment within one year. Earthjustice then claims that EPA appears to be trying to avoid this limitation by treating open-ended promises of the State to reduce emissions as enforceable commitments even

though the State has never specified exactly what it commits to do. Earthjustice states that courts have rejected similar attempts to circumvent the statute's limitations on conditional approval and cites *Sierra Club v. EPA*, 356 F.3d 296, 298 (D.C. Cir. 2004) as overturning EPA's conditional approval of SIPs based in part on the fact that the commitments identified no specific measures the state would implement.

Response: As pertinent to the comment, *Sierra Club* involved EPA's conditional approval under section 110(k)(4) of SIPs lacking in their entirety RACM and rate-of-progress (ROP) demonstrations and contingency measures based on letters submitted by states that committed to cure these deficiencies. The court rejected EPA's construction of section 110(k)(4) as contrary to the unambiguous statutory language requiring the state to commit to adopt *specific* enforceable measures. *Sierra Club* at 302. The court found that EPA's construction turned the section 110(k)(4) conditional approval into a means of circumventing SIP deadlines. *Id.* at 303.

EPA does not dispute the holding of *Sierra Club*. However that case is not germane to EPA's approval of CARB's and the District's commitments here because the Agency is not approving those commitments under section 110(k)(4). The relevant precedent is instead *BCCA Appeal Group v. EPA*, 355 F.3d 817 (5th

Cir. 2003). The facts in *BCCA* were very similar to those presented here. In *BCCA*, EPA approved an enforceable commitment in the Houston ozone SIP to adopt and implement unspecified NO_x controls on a fixed schedule to achieve aggregate emissions reductions. Petitioners claimed that EPA lacked authority under the CAA to approve a SIP containing an enforceable commitment to adopt unspecified control measures in the future. The court disagreed and found that section 110(k)(4) conditional approvals do not supplant EPA's practice of fully approving enforceable commitments:

Nothing in the CAA speaks directly to enforceable commitments. The CAA does, however, provide EPA with great flexibility in approving SIPs. A SIP may contain "enforceable emission limitations and other control measures, means, or techniques . . . as well as schedules and timetables for compliance, as may be necessary or appropriate" to meet the CAA's requirements.... Thus, according to the plain language of the statute, SIPs may contain "means," "techniques" and/or "schedules and timetables for compliance" that the EPA considers "appropriate" for attainment so long as they are "enforceable." See *id.* § 7410(a)(2)(A). "Schedules and timetables" is broadly defined as "a schedule of required

measures including an enforceable sequence of actions or operations leading to compliance with an emission limitation, prohibition or standard." 42 U.S.C. § 7602(p). The remaining terms are not defined by the Act. Because the statute is silent on the issue of whether enforceable commitments are appropriate means, techniques, or schedules for attainment, EPA's interpretation allowing limited use of an enforceable commitment in the Houston SIP must be upheld if reasonable.

BCCA at 839-840. The court upheld EPA's approval of the commitment, finding that "EPA reasonably concluded that an enforceable commitment to adopt additional control measures on a fixed schedule was an 'appropriate' means, technique, or schedule or timetable for compliance" under sections 110(a)(2)(A) and 172(c)(6). *Id.* at 841. Thus the court recognized that sections 110(a)(2)(A) and 172(c)(6) provide a basis for EPA to approve enforceable commitments as distinct from the commitments contemplated by section 110(k)(4), which are not in fact enforceable but instead lead to SIP disapproval if not honored. See also *Environmental Defense v. EPA*, 369 F.3d 193, 209-210 (2nd Cir. 2004) (similarly upholding enforceable SIP commitments). As a result, contrary to Earthjustice's contention, section 110(k)(4) is not a bar to EPA's approval of

CARB's and the District's enforceable commitments and that approval under section 110(k)(3) is permissible as an appropriate means, technique or schedule or timetable for compliance under sections 110(a)(2)(A) and 172(c)(6).

Comment: Earthjustice states that the commitments are "absurd" because CARB may claim credit toward its aggregate commitments from everything from new regulations to unenforceable incentive programs to "actual decreases occurring in any air basin for which emissions reduction commitments have been made."

Earthjustice states this is arbitrary and that EPA needs to explain how the commitments offered in the plan would be enforced, what relief EPA or the public could demand, and when a suit could be brought. Earthjustice states that it does not see how these open-ended commitments are practically enforceable in a court of law and asserts that EPA must lay out a roadmap that can be followed by courts in the future to ensure that meaningful emissions reductions are achieved.

Response: As discussed in our amended proposal (76 FR at 41355), the CAA allows approval of enforceable commitments that are limited in scope where circumstances warrant the use of such commitments in place of adopted control measures. Commitments approved by EPA under section 110(k)(3) of the CAA are enforceable by EPA and citizens under, respectively, sections

113 and 304 of the CAA. In the past, EPA has approved enforceable commitments and courts have enforced these actions against states that failed to comply with those commitments: See, e.g., *American Lung Ass'n of N.J. v. Kean*, 670 F. Supp. 1285 (D.N.J. 1987), *aff'd*, 871 F.2d 319 (3rd Cir. 1989); *NRDC, Inc. v. N.Y. State Dept. of Env. Cons.*, 668 F. Supp. 848 (S.D.N.Y. 1987); *Citizens for a Better Env't v. Deukmejian*, 731 F. Supp. 1448, *recon. granted in par*, 746 F. Supp. 976 (N.D. Cal. 1990); *Coalition for Clean Air v. South Coast Air Quality Mgt. Dist.*, No. CV 97-6916-HLH, (C.D. Cal. Aug. 27, 1999). See 76 FR at 41355, n. 27.

In response to Earthjustice's comment, we are clarifying in this final action that we are not providing SIP credit for "actual decreases" in air pollution emissions or "recession-related reductions" in approving the 2008 PM_{2.5} Plan. Rather, we are approving the 2008 PM_{2.5} Plan taking into account CARB's revisions to the control strategy based on the revisions to its projected baseline inventories.

Specifically, as explained in our 2011 proposal, CARB's aggregate emissions reduction commitment in the 2008 PM_{2.5} Plan as submitted in 2008 is to achieve 76 tpd of NO_x reductions and 5 tpd of PM_{2.5} reductions by 2014. See 76 FR at 41346; CARB Resolution 07-28, Attachment B at pp. 3-6 and 2009 State

Strategy Status Report, p. 21.⁴⁴ The District's aggregate emissions reduction commitment in the Plan as submitted in 2008 is to achieve 8.97 tpd of NOx reductions, 6.7 tpd of PM2.5 reductions, and 0.92 tpd of SO2 reductions by 2014. See 76 FR at 41345, Table 3. More broadly, however, CARB's emissions reduction commitment is to achieve the "total emissions reductions necessary to attain Federal standards" through "the implementation of control measures; the expenditure of local, State, or federal incentive funds; or through other enforceable measures." See CARB Resolution 07-28, Attachment B at pp. 3-6. The updates and improvements to the inventories as presented in CARB's 2011 Progress Report altered the calculation of the reductions needed for attainment of the 1997 PM2.5 standards in SJV by reducing the total reductions needed from control strategy measures to 9 tpd (for PM2.5), 26.1 tpd (for NOx), and 0.8 tpd (for SO2). See 76 FR at 41354, Table 7. We therefore interpret CARB's emissions reduction commitment, together with the adjustments to the 2014 baseline inventories provided in CARB's 2011 SIP revision and the District's commitments, as adjusting CARB's total emission reduction commitment such that

⁴⁴ In our proposed rule (76 FR 76 FR 41338, 41346) we reference the 2007 State Strategy, p. 63 and CARB Resolution 07-28, Attachment B. p.6. Note that page 63 of the 2007 State Strategy was replaced with information in the 2009 State Strategy Status Report, pp. 20-21.

the CARB is now obligated to achieve 2.3 tpd of PM_{2.5} reductions and 17.1 tpd of NO_x reductions⁴⁵ by 2014 through enforceable control measures to provide for attainment of the 1997 PM_{2.5} NAAQS in SJV. The District's aggregate emissions reduction commitment in the Plan as submitted in 2008 (8.97 tpd of NO_x reductions, 6.7 tpd of PM_{2.5} reductions, and 0.92 tpd of SO₂ reductions by 2014) remains unchanged. See Table 3 below.

We also note that we do not agree with CARB's position that "actual decreases occurring in any air basin for which emissions reduction commitments have been made" or incentive programs may be counted as SIP credit toward CARB's enforceable commitment, unless the State provides a demonstration that such emissions decreases are actually enforceable or otherwise meet EPA's requirements for SIP creditability.

CARB's commitment is to adopt and implement measures that will achieve specific reductions of NO_x and PM_{2.5} emissions and are, as such, specific strategies designed to achieve the SIP's overall objectives. Further, if CARB fails to meet its commitments, EPA could make a finding of failure to implement the SIP under CAA Section 179(a), which starts an 18-month period for the State to correct the non-implementation before

⁴⁵ Note that the District has already achieved all of the SO_x reductions necessary to attain. See 76 FR 41338, 41354, Table 8.

mandatory sanctions are imposed, or alternatively either EPA or citizens could enforce the commitments directly against CARB under CAA section 113 or 304, respectively.

Comment: Earthjustice states that courts "may only enforce SIP strategies" and that "[m]ere approval of an aspirational goal or non-specific promise into the SIP does not convert that goal or promise into an enforceable commitment." In support of these assertions, Earthjustice cites *Bayview Hunters Point Community Advocates v. Metropolitan Transp. Comm'n*, 366 F.3d 692, 701 (9th Cir. 2004) and *Citizens for a Better Environment v. Metropolitan Transp. Comm'n*, 746 F. Supp. 976, 980 (N.D.Cal. 1990) [known as CBE II]. In addition, Earthjustice singles out *El Comité Para El Bienestar de Earlimart v. Warmerdam*, 539 F.3d 1062, 1067 (9th Cir. 2008), stating that in *El Comité* the court explained that because an inventory in a SIP is not a "standard or limitation" as defined by the CAA, it was not an independently enforceable aspect of the SIP. Thus, Earthjustice reasons, in order to be enforceable, not only must a state's commitment to adopt additional measures to attain emission standards be specific and announced in plain language, but any data or rubric that will be used to determine when and how the state will adopt those measures must be enforceable.

Similarly, citing *Bayview* and *El Comite*, AIR characterizes CARB's and the District's commitments to achieve aggregate emissions reductions by the attainment year as "global commitments" that could be interpreted as "goals" unenforceable by citizens under Ninth Circuit precedent, rather than enforceable "strategies" to achieve those goals. AIR argues that the plans' global commitments are not enforceable for two reasons. First, enforcement is not practical because it is virtually impossible for citizens or EPA to determine whether the CARB and the District have, in fact, met the global commitments. Second, the manner in which CARB and the District determine compliance with the tonnage target is left to their discretion, and citizens and EPA would be placed in the situation held by the plaintiffs in *Warmerdam*.

AIR adds that even if the commitments are viewed as "strategies" enforcement is not practical because when no measures are submitted to EPA for inclusion into the SIP, citizens have no idea which measures CARB has used to satisfy the total tonnage commitments. AIR also states that there are no provisions for CARB and the District to report to EPA and the public what actions they have taken to comply with the tonnage commitments. EPA and citizens are left to determine, based on

information collected by CARB and the District, whether the commitments have in fact been met.

Response: Under CAA section 110(a)(2)(A), SIPs must include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the Act, as well as timetables for compliance. Similarly, section 172(c)(6) provides that nonattainment area SIPs must include enforceable emission limitations and such other control measures, means or techniques "as may be necessary or appropriate to provide for attainment" of the NAAQS by the applicable attainment date.

Control measures, including commitments in SIPs, are enforced directly by EPA under CAA section 113 and also through CAA section 304(a) which provides for citizen suits to be brought against any person who is alleged "to be in violation of ... an emission standard or limitation...." "Emission standard or limitation" is defined in subsection (f) of section 304. As observed in *Conservation Law Foundation, Inc. v. James Busey et al.*, 79 F.3d 1250, 1258 (1st Cir. 1996):

Courts interpreting citizen suit jurisdiction have largely focused on whether the particular standard or requirement plaintiffs sought to enforce was sufficiently specific. Thus, interpreting citizen suit jurisdiction as

limited to claims "for violations of specific provisions of the act or specific provisions of an applicable implementation plan," the Second Circuit held that suits can be brought to enforce specific measures, strategies, or commitments designed to ensure compliance with the NAAQS, but not to enforce the NAAQS directly. See, e.g., *Wilder*, 854 F.2d at 613-14. Courts have repeatedly applied this test as the linchpin of citizen suit jurisdiction. See, e.g., *Coalition Against Columbus Ctr. v. City of New York*, 967 F.2d 764, 769-71 (2d Cir. 1992); *Cate v. Transcontinental Gas Pipe Line Corp.*, 904 F. Supp. 526, 530-32 (W.D. Va. 1995); *Citizens for a Better Env't v. Deukmejian*, 731 F. Supp. 1448, 1454-59 (N.D. Cal.), modified, 746 F. Supp. 976 (1990).

Thus courts have found that the citizen suit provision cannot be used to enforce the aspirational goal of attaining the NAAQS, but can be used to enforce specific strategies to achieve that goal, including enforceable commitments to develop future emissions controls.

We describe CARB's and the District's commitments in the 2007 State Strategy (revised in 2009 and 2011) and the 2008 PM2.5 Plan in detail in our amended proposal. See 76 FR at 41343-41347. The 2007 State Strategy includes commitments to

propose defined new measures and an enforceable commitment for emissions reductions sufficient, in combination with existing measures and the District's commitments, to attain the PM2.5 NAAQS in the SJV by April 5, 2015. See CARB Resolution 07-28, Attachment B at pp. 3-6 and 2009 State Strategy Status Report, p. 21. For the SJV, the CARB's emissions reductions commitments as submitted in 2008 were to achieve 76 tpd NO_x and 5 tpd of direct PM2.5 by 2014. *Id.*

SJVUAPCD's commitments as submitted in 2008 were to achieve 9 tpd NO_x and 6.7 tpd direct PM2.5 by 2014. See 76 FR at 41345-41346, See also 2008 PM2.5 Plan, p. 6-9, Table 6-2. The language used in the Board's resolution adopting the 2008 PM2.5 Plan at page 5 to describe its commitment is mandatory and unequivocal in nature:

9. The District Governing Board *commits to adopt and implement* the rules and measures in the 2008 PM2.5 Plan by the dates specified in Chapter 6 *to achieve the emissions reductions shown in Chapter 6*, and to submit these rules and measures to the ARB within one month of adoption for transmittal to EPA as a revision to the State Implementation Plan. If the total emissions reductions from the adopted rules are less than those committed to in the Plan, the District Governing Board *commits to adopt,*

submit, and implement substitute rules and measures that will achieve equivalent reductions in emissions of direct PM2.5 or PM2.5 precursors in the same adoption and implementation timeframes or in the timeframes needed to meet CAA milestones. (emphasis added).

SJVUAPCD Board Resolution No. 08-04-10, p. 5.

As discussed above, the 2011 SIP revisions reduced the reductions needed from new measures in 2014 to attain to 9 tpd of PM2.5 reductions, 26.1 tpd of NO_x reductions, and 0.8 tpd of SO_x. See 76 FR at 41354, Table 7. The District's aggregate emissions reduction commitment in the Plan as submitted in 2008 remains unchanged (8.97 tpd of NO_x reductions, 6.7 tpd of PM_{2.5} reductions, and 0.92 tpd of SO₂ reductions by 2014). Thus, CARB remains obligated to achieve through the adoption of enforceable measures by 2014, 2.3 tpd of PM2.5 and 17.1 tpd of NO_x. The District's commitments remain as submitted in 2008 at 9 tpd NO_x, 6.7 tpd direct PM2.5 and 0.9 tpd SO_x by 2014. See Table 3 below.

Thus, CARB's and the District's commitments here are to adopt and implement measures that will achieve specific amounts of NO_x and direct PM2.5 emissions reductions by 2014. These are not mere aspirational goals to ultimately achieve the standards or emissions inventories as mentioned by Earthjustice. Rather, the State and District have committed to adopt enforceable

measures no later than 2014 that will achieve these specific amounts of emissions reductions prior to the attainment date of April 5, 2015. All of these control measures are subject to State and local rulemaking procedures and public participation requirements, through which EPA and the public may track the State/District's progress in achieving the requisite emissions reductions. EPA and citizens may enforce these commitments under CAA sections 113 and 304(a), respectively, should the State/District fail to adopt measures that achieve the requisite amounts of emissions reductions by the beginning of 2014. See 40 CFR 51.1007(b) (requiring implementation of all control measures needed for expeditious attainment no later than the beginning of the year prior to the attainment date). We conclude that these enforceable commitments to adopt and implement additional control measures to achieve aggregate emissions reductions on a fixed schedule are appropriate means, techniques, or schedules for compliance under sections 110(a)(2)(A) and 172(c)(6) of the Act.

Both Earthjustice and AIR cite *Bayview* as support for their contention that the plan's commitments are unenforceable aspirational goals. *Bayview* does not, however, provide any such support. That case involved a provision of the 1982 Bay Area 1-hour ozone SIP, known as TCM 2, which states in pertinent part:

Support post-1983 improvements identified in transit operator's 5-year plans, after consultation with the operators adopt ridership increase target for 1983-1987.

EMISSION REDUCTION ESTIMATES: These emission reduction estimates are predicated on a 15% ridership increase. The actual target would be determined after consultation with the transit operators.

Following a table listing these estimates, TCM 2 provided that "[r]idership increases would come from productivity improvements..."

Ultimately the 15 percent ridership estimate was adopted by the Metropolitan Transportation Commission (MTC), the implementing agency, as the actual target. Plaintiffs subsequently attempted to enforce the 15 percent ridership increase. The court found that the 15 percent ridership increase was an unenforceable estimate or goal. In reaching that conclusion, the court considered multiple factors, including the plain language of TCM 2 (e.g., "[a]greeing to establish a ridership 'target' is simply not the same as promising to attain that target," *Bayview* at 698); the logic of TCM 2, *i.e.*, the drafters of TCM 2 were careful not to characterize any given increase as an obligation because the TCM was contingent on a number of factors beyond MTC's control, *id.* at 699; and the fact

that TCM 2 was an extension of TCM 1 that had as an enforceable strategy the improvement of transit services, specifically through productivity improvements in transit operators' five-year plans, *id.* at 701. As a result of all of these factors, the Ninth Circuit found that TCM 2 clearly designated the productivity improvements as the only enforceable strategy. *Id.* at 703.

The commitments in the 2007 State Strategy (revised in 2009 and 2011) and 2008 PM2.5 Plan are in stark contrast to the ridership target that was deemed unenforceable in *Bayview*. The language in CARB's and the District's commitments, as stated multiple times in multiple documents, is specific; the intent of the commitments is clear; and the strategy of adopting measures to achieve the required reductions is completely within CARB's and the District's control. Furthermore, as stated previously, CARB and the District identify specific emissions reductions that they will achieve, how they will be achieved and the time by which these reductions could be achieved, *i.e.*, by 2014.

Earthjustice also cites *CBE II* at 980 for the proposition that courts can only enforce "express" or "specific" strategies. However, as discussed below, there is nothing in the *CBE* cases that supports the commenter's view that the CARB and District commitments are neither express nor specific. In fact, these

cases support our interpretation of CARB's and the District's commitments.

Citizens for a Better Environment v. Deukmejian, 731 F.Supp.1448 (N.D. Cal. 1990), known as *CBE I*, concerned in part contingency measures for the transportation sector in the 1982 Bay Area 1-hour ozone SIP. The provision states: "If a determination is made that RFP is not being met for the transportation sector, MTC will adopt additional TCMS within 6 months of the determination. These TCMS will be designed to bring the region back within the RFP line." The court found that "[o]n its face, this language is both specific and mandatory." *Id.* at 1458. In *CBE I*, CARB and MTC argued that TCM 2 could not constitute an enforceable strategy because the provision fails to specify exactly what TCMS must be adopted. The court rejected this argument, finding that "[w]e discern no principled basis, consistent with the Clean Air Act, for disregarding this unequivocal commitment simply because the particulars of the contingency measures are not provided. Thus we hold that the basic commitment to adopt and implement additional measures, should the identified conditions occur, constitutes a specific strategy, fully enforceable in a citizens action, although the exact contours of those measures are not spelled out." *Id.* at

1457.⁴⁶ In concluding that the transportation and stationary source contingency provisions were enforceable, the court stated: "Thus, while this Court is not empowered to enforce the Plan's overall objectives [footnote omitted; attainment of the NAAQS]--or NAAQS--directly, it can and indeed, must, enforce specific strategies committed to in the Plan." *Id.* at 1454.

Earthjustice's reliance on *CBE II* is misplaced. It also involves in part the contingency measures in the 1982 Bay Area Plan. In *CBE II*, defendants argued that RFP and the NAAQS are coincident because, had the plan's projections been accurate, then achieving RFP would have resulted in attainment of the NAAQS. The court rejected this argument, stating that:

the Court would be enforcing the *contingency plan*, an express strategy for attaining NAAQS. Although enforcement of this strategy might possibly result in attainment, it is distinct from simply ordering that NAAQS be achieved without anchoring that order on any specified strategy.

Plainly, the fact that a specified strategy might be

⁴⁶ In this passage, the court was referring specifically to the stationary source contingency measures in the Bay Area plan which contained a commitment to adopt such measures if emissions targets were not met. The Plan identified a number of potential stationary sources but did not commit to any particular one. In discussing the transportation contingency measures, the court applied this same reasoning. *Id.* at 1456-1457.

successful and lead to attainment does not render that strategy unenforceable.

(Emphasis in original). *CBE II* at 980.

CARB's and the District's commitments here are analogous to the terms of the contingency measures in the *CBE* cases. CARB and the District commit to adopt measures, which are not specifically identified, to achieve a specific tonnage of emissions reductions. Thus, the commitment to a specific tonnage reduction is comparable to a commitment to achieve RFP. Similarly, a commitment to achieve a specific amount of emissions reductions through adoption and implementation of unidentified measures is comparable to the commitments to adopt unspecified TCMs and stationary source measures. The key is that commitment must be clear in terms of what is required, e.g., a specified amount of emissions reductions or the achievement of a specified amount of progress (i.e., RFP). ARB's and the District's commitments are thus clearly a specific enforceable strategy rather than an unenforceable aspirational goal.

Earthjustice's reliance on *El Comite* is also misplaced. The plaintiffs in the district court attempted to enforce a provision of the 1994 California 1-hour ozone SIP known as the Pesticide Element. The Pesticide Element relied on an inventory of pesticide VOC emissions to provide the basis to determine

whether additional regulatory measures would be needed to meet the SIP's pesticides emissions target. To this end, the Pesticide Element provided that "ARB will develop a baseline inventory of estimated 1990 pesticidal VOC emissions based on 1991 pesticide use data...." *El Comité Para El Bienestar de Earlimart v. Helliker*, 416 F. Supp. 2d 912, 925 (E.D. Cal. 2006). CARB subsequently employed a different methodology that it deemed more accurate to calculate the baseline inventory. The plaintiffs sought to enforce the commitment to use the original methodology, claiming that the calculation of the baseline inventory constitutes an "emission standard or limitation." The district court disagreed:

By its own terms, the baseline identifies emission sources and then quantifies the amount of emissions attributed to those sources. As defendants argue, once the sources of air pollution are identified, control strategies can then be formulated to control emissions entering the air from those sources. From all the above, I must conclude that the baseline is not an emission "standard" or "limitation" within the meaning of 42 U.S.C. § 7604 (f) (1) - (4).

Id. at 928. In its opinion, the court distinguished *Bayview* and *CBE I*, pointing out that in those cases "the measures at issue were designed to reduce emissions." *Id.*

On appeal, the plaintiffs shifted their argument to claim that the baseline inventory and the calculation methodology were necessary elements of the overall enforceable commitment to reduce emissions in nonattainment areas. The Ninth Circuit agreed with the district court's conclusion that the baseline inventory was not an emission standard or limitation and rejected plaintiffs' arguments attempting "to transform the baseline inventory into an enforceable emission standard or limitation by bootstrapping it to the commitment to decide to adopt regulations, if necessary." *Id.* at 1073.

While Earthjustice cites the Ninth Circuit's *El Comite* opinion, its utility in analyzing the CARB and District commitments here is limited to that court's agreement with the district court's conclusion that neither the baseline nor the methodology qualifies as an independently enforceable aspect of the SIP. Rather, it is the district court's opinion, in distinguishing the commitments in *CBE* and *Bayview*, that provides insight into the situation at issue in our action. As the court recognized, a baseline inventory or the methodology used to calculate it, is not a measure to reduce emissions. It instead

"identifies emissions sources and then quantifies the amount of emissions attributed to those sources." In contrast, as stated previously, in the 2007 State Strategy (revised 2009 and 2011) and SJV 2007 PM2.5 Plan, ARB and the District commits to adopt and implement measures sufficient to achieve specified emissions reductions by a date certain. As described above, a number of courts have found commitments substantially similar to ARB's here to be enforceable under CAA section 304(a).

Comment: Earthjustice comments that before EPA can approve the commitments in the PM2.5 plan it must explain how the promise to reduce emissions by some amount is a "standard or limitation" enforceable under section 113 or 304 of the Act. Moreover, citing CAA section 110(a)(2)(A), Earthjustice asserts that EPA must explain how enforcement of these commitments, which arguably could not even be considered until after the attainment deadline has come and gone, is adequate to assure the requirements of the Act (including timely attainment) are met. Earthjustice contends that the strategy of relying on these open-ended commitments is a recipe for failure and is not a reasonable substitute for the detailed, enforceable plan envisioned and required by the Act.

Response: We disagree. As discussed above, EPA believes that CARB's and the District's commitments to adopt and implement

control measures to achieve the specified aggregate tonnage by 2014 are enforceable as an emission standard or limitation under CAA section 304. The fact that the State may meet its SIP obligation by adopting measures that are not specifically identified in the SIP, or through one of several available techniques, does not render the requirement to achieve the aggregate emissions reductions unenforceable. State and local control measures are subject to rulemaking procedures and public participation requirements, through which EPA and the public may track the State/District's progress in achieving the requisite emissions reductions in the years leading up to 2014 and before the attainment date of April 5, 2015. Should the State/District fail to adopt measures that achieve the requisite amounts of emissions reductions by the beginning of 2014 (see 40 CFR 51.1007(b)), EPA and citizens may enforce these commitments under CAA sections 113 and 304(a), respectively.

F. Comments on the Proposed Action on the Attainment

Demonstration and Attainment Date Extension

Comment: Earthjustice comments that EPA cannot grant an extension of the attainment date to April 5, 2015 because the flaws Earthjustice alleges are in the 2008 PM_{2.5} Plan's attainment modeling and RACM/RACT analysis meant that the demonstration required to grant a 5-year extension have not been

met. Earthjustice asserts that the alleged flaws include the exemptions for significant sources of emissions from the charbroiling, glass melting and open burning rules; the delay in the implementation of certain control requirements (glass melting and agricultural equipment), and the exclusion of controls for VOC and condensable PM_{2.5} emissions in the Plan Response: We have evaluated Earthjustice's comments on the RACM/RACT analysis, VOC as an attainment plan precursor, and condensable particulate and have determined that none change our conclusion that the SJV 2008 PM_{2.5} Plan provides for RACM as required by CAA section 172(c)(1).

Under the PM_{2.5} implementation rule, states that request an extension of the attainment date under CAA section 172(a)(2) must provide sufficient information to show that attainment by April 5, 2010 is impracticable due to the severity of the nonattainment problem in the area and the lack of available and feasible control measures to provide for faster attainment. 40 CFR 51.1004(b). States must also demonstrate that all RACM and RACT for the area are being implemented to bring about attainment of the standard by the most expeditious alternative date practicable for the area. 72 FR 20586 at 20601. As discussed in our 2011 proposal, we believe that California has met the relevant tests for granting an extension of the

attainment date under CAA section 172(a)(2). See 76 FR 41388, 41341.

Comment: Earthjustice comments that EPA should not approve the attainment demonstration, because of its "heavy" reliance on State commitments to adopt last-minute control measures and because the emissions reductions and the attainment targets are not valid given the problems in the inventory and the modeling analysis. Furthermore, the defective modeling results in inaccurate attainment target levels.

Response: The SJV 2008 PM_{2.5} SIP does not rely heavily on State commitment to "adopt last-minute controls." As noted previously, the bulk of the emissions reductions needed for attainment are from measures adopted prior to 2007. 76 FR 41338, 41354.

Moreover, one of EPA's criteria for approving attainment demonstrations that rely on commitments is that the commitments represent a limited portion of the reductions needed for attainment. As we have shown, CARB's and the District's remaining commitments account for only 4.5 percent (12.9 tpd) of the NO_x and 13.2 percent (3.0 tpd) of the PM_{2.5} reductions needed for attainment. *Id.* In comparison, already achieved reductions are 271 tpd of NO_x and 19.7 tpd of PM_{2.5}. See 76 FR 41338, 41354 (Table 8) (numbers are the sum of lines B and C). Finally, we have determined that the SJV PM_{2.5} Plan provides for

a generally linear reduction in emissions demonstrating reasonable further progress as required by CAA 172(c)(2).

G. Comments on the Proposed Actions on the Reasonable Further Progress Demonstration

Comment: Earthjustice comments that EPA should disapprove the RFP demonstration because it fails to address VOC and to show generally linear progress in reducing emissions. It also argues that because of the alleged defects in the inventory and the alleged failure of the modeling analysis to identify the target level of emissions reductions, it is impossible to assess progress. It further argues that the RFP demonstration must also be updated to reflect corrections to the inventory.

Response: For the reasons discussed in the 2011 proposal and response to comments on the precursor issue above, EPA has found that insufficient data exist to reverse the presumption in the PM2.5 implementation rule that VOC is not a PM2.5 attainment plan precursor for attainment of the 1997 PM2.5 standards in the SJV. See 76 FR 41350 and 2011 Proposal TSD, p. 50. Because VOC is not considered an attainment plan precursor, it need not be addressed in the RFP demonstration. See 40 CFR 51.1009(c).

For the reasons discussed in the 2011 proposal and response to comments on the air quality modeling above in section II.B., EPA has found that the air quality modeling in the SJV 2007

PM2.5 SIP is adequate to support the attainment demonstration and thus to establish the target level of emissions. See 76 FR 41338, 41348 and 2011 Proposal TSD, section II.B. As discussed in the 2011 proposal, EPA evaluated the effect of the changes in the base year inventory on the RFP demonstration and determined that it did not revise our conclusion that the Plan provided for RFP. See 76 FR 41338, 41357 (ftn. 32) and 2011 Proposal TSD, p. 122.

H. Comments on the Proposed Actions on the Contingency Measures

Comment: Earthjustice states that EPA's analysis of the contingency measures in the 2008 Plan is generally sound. Earthjustice, however, contends that our analysis relies on an RFP analysis that in turn relies on invalid NOx to PM2.5 interpollutant equivalency ratios. It further argues that because these ratios are invalid, the assessment of the excess reductions in the RFP demonstration is also invalid and the shortfall targets must be recalculated using valid methods and results.

Response: EPA's calculation of the excess reductions in the RFP demonstration is done on a per pollutant basis and does not assume any interpollutant trading. See 76 FR 41339, 41359 (Table 10) and 2011 Proposal TSD, p. 130. In the 2011 Progress Report, CARB states that these reductions are equal to at least one-

year's worth of RFP when considered on a PM2.5 equivalency basis (see 2011 Progress Report, p. 2); however, to make this statement, the State relies in part on an interpollutant trading ratio of 1 ton of SOx reductions to 1 ton of PM2.5 reductions. As discussed in section II.B.4. of the 2011 Proposal TSD, EPA found that there was insufficient technical support for this ratio and EPA did not allow its use in the RFP demonstration or for any other purpose. *Id.* at 42358 and p. 129.

Comment: In its comments on the 2010 proposal, Earthjustice notes that the District proposes to rely on emissions reductions achieved by the ozone nonattainment fee and other incentive programs. It argues that the District does not have criteria for how these monies will be spent and does not provide a mechanism for ensuring that any claimed emissions reductions are enforceable and that any future reliance on funding programs to reduce emissions must demonstrate that the emissions reductions meet statutory creditability requirements including an explanation of how these agreements between the District and the subsidized source can be enforced by EPA or the public.

Response: We are not approving reductions from the District's incentive grant programs as part of the 2008 PM2.5 SIP's contingency measures provisions; therefore, comments related to them are not germane to this action. In both its 2010 and 2011

proposals EPA proposed to disapprove the Plan's contingency measures provisions and is disapproving those provisions in today's action. See 75 FR 74518, 74539 and 76 FR 41338, 41358. Those provisions include the District's ozone nonattainment fee program and other incentive programs as potential contingency measures.

In both proposals, we noted that while neither the CAA nor EPA policy bar the use of emissions reductions from incentive programs to meet all or part of an area's contingency measure obligation, the incentive programs must assure that the reductions are surplus, quantifiable, enforceable, and permanent in accordance with EPA's guidance. See "Improving Air Quality with Economic Incentive Programs," EPA-452/R-01-001 (January 2001). We also noted that the 2008 PM_{2.5} Plan does not identify the incentive grant programs expected to generate the emissions reductions. The Plan also does not identify the quantity of these emissions reductions that the District intended to use to meet the contingency measure requirement. Therefore, we are unable to determine if they are SIP creditable or sufficient to provide in combination with other measures the roughly one-year's worth of RFP needed. For these reasons, we determined that programs did not currently meet the CAA

requirements for contingency measures. See 75 FR 74518, 74538 and 76 FR 41338, 41358.

Comment: While AIR agrees with EPA's proposed disapproval of the contingency measures, it argues against the use of waiver measures and on-road fleet turnover as contingency measures because waiver measures are not in the SIP and there are no control measures that require fleet turnover. It further argues that reductions from fleet turnover are derived from assumptions based on voluntary future activity that fail to meet the Act's requirements for enforceable measures. Finally, it asserts that EPA has made no finding that such fleet turnover reductions have actually occurred.

Response: As discussed previously, we believe that reductions from CAA 209 waiver measures can be used to meet CAA requirements including the contingency measure requirement even though they are not in the SIP.

The measures relied on in part for contingency measure emissions reductions are the State and federal on- and off-road new engines standards. Fleet turnover is the mechanism by which these new engine standards are implemented, and it is how these standards actually result in emissions reductions in an area. CARB calculates reductions from its mobile sources, including base year and future projected year, using its EMFAC2007 and

OFFROAD models. These models included assumptions regarding fleet turnover based on historical records.⁴⁷ Recent updates to the truck, bus, and offroad equipment inventories included review and adjustments of fleet turnover rates which are also based on available records. See 2010 Truck Rule ISOR, section F.

Comment: SJVUACPD commented that EPA's current requirement that contingency measures provide for one-year's worth of emissions reductions is not practical for areas like the SJV and that EPA should work towards realistic and specific solutions for future implementation rules. It also stated that it would continue to work with EPA to incorporate reductions from the District's incentive programs into the SIP so that they may be used satisfy the contingency measures requirement.

Response: EPA recognizes the difficulty of identifying contingency measures and appreciates the District's concerns. We will continue to work with the District to identify potential contingency measures including incentive programs that produce reductions that are surplus, quantifiable, enforceable, and permanent in accordance with EPA guidance.

⁴⁷ See CARB, "Public Meeting to Consider Approval of Revisions to the State's On-Road Motor Vehicle Emissions Inventory, Technical Support Document," May 2000, section 7.3 "Retention Rates" which can be found at http://www.arb.ca.gov/msei/onroad/doctable_test.htm.

I. Comments on the Proposed Actions on the Motor Vehicle

Emissions Budgets and Trading Mechanism

Comment: Earthjustice comments that EPA cannot approve the revised motor vehicle emissions budgets because they are derived from attainment and RFP demonstrations that Earthjustice asserts are not approvable because they are based on invalid modeling. It also claims the issues with the modeling also affect the conformity analysis because it depends on interpollutant equivalency ratio between NOx and PM2.5 that is derived from the modeling. Earthjustice notes that CARB derived this ratio by conducting a sensitivity analysis with the model which according to Earthjustice, EPA acknowledged was not a legitimate basis for determining interpollutant equivalency ratios, citing the 2011 Proposal TSD at p. 47. Earthjustice further claims that these "defective ratios" were used to demonstrate RFP and conformity.

Response: We agree that EPA would not be able to approve budgets that are derived from unapprovable or disapproved attainment or RFP demonstrations. However, we are approving these demonstrations in the SJV 2008 PM2.5 Plan and, because they are derived from those demonstrations and otherwise meet all applicable requirements for transportation conformity budgets, EPA's is also approving the budgets. For the reasons discussed above in our response to comments on the air quality

modeling, we do not agree with Earthjustice that the modeling is invalid.

CARB included a trading mechanism to be used in transportation conformity analyses that use the proposed budgets as allowed for under 40 CFR 93.124. This trading mechanism allows future decreases in NO_x emissions from on-road mobile sources to offset any on-road increases in PM_{2.5}, using a NO_x:PM_{2.5} ratio of 9:1. As proposed by CARB and proposed for approval by EPA, the trading mechanism would only be used, if needed, for conformity analyses for years after 2014. Also, to ensure that the trading mechanism does not impact the ability of the SJV to meet the NO_x budget, the NO_x emissions reductions available to supplement the PM_{2.5} budget would only be those remaining after the 2014 NO_x budget has been met. See 2011 Progress Report, Appendix D, p. 2 and 76 FR 41338, 41361. We found that the method CARB used to derive the 9:1 NO_x to PM_{2.5} ratio, which was based on the SIP's photochemical modeling, is adequate for purposes of assessing the effect of area-wide emissions changes, such as are used in RFP, contingency measures, and conformity budgets. See 76 FR 41338, 41349 and 2011 Proposal TSD, p.46.

EPA did find that the method used by CARB and the District (a modified rollback approach) to derive the 1:1 SO_x to PM_{2.5} is

inadequate for determining interpollutant equivalency ratios and stated that this issue would be better explored with a photochemical model. See 76 FR 41338, 41349 and 2011 Proposal TSD, p.47. It is this latter discussion that Earthjustice incorrectly cites as its basis for claiming that EPA rejected the interpollutant trading ratio used in establishing the trading mechanism for transportation conformity analyses. The 2008 PM_{2.5} SIP does not establish motor vehicle emissions budgets for SO₂ and therefore does not establish an SO₂:PM_{2.5} trading mechanism for transportation conformity purposes.

Comment: Earthjustice claims that a transportation agency cannot rely on budgets derived from what it considers to be the unapprovable SJV 2008 PM_{2.5} SIP without violating CAA section 176(c)(1) because they would not be able to assure that their actions would not interfere with timely attainment or reasonable further progress.

Response: As documented in the TSD and our 2011 proposed rule, EPA has found that the SJV 2008 PM_{2.5} SIP demonstrates reasonable further progress and expeditious attainment of the 1997 PM_{2.5} standards consistent with the requirements of the CAA and EPA's implementing regulations. We have also concluded that the budgets in this SIP are consistent with these demonstrations and are both adequate and approvable. Therefore, the SJV MPOs

must use these budgets in their transportation conformity determinations.

J. Comments on Other Topics Not Covered Previously

Comment: AIR claims that EPA fails to list the 2009 State Strategy Status Report (pages 11-23) among the documents which it proposes to include as part of the SIP, citing 76 FR 41338, 41361, and that this is an error given CARB's intent in the 2009 State Strategy Status Report (citing p. 11). AIR requests that EPA clarify its intent to approve a CARB commitment for staff to propose a rule to regulate in-use mobile agricultural equipment. AIR notes that this commitment was part of the 2007 State Strategy (citing CARB Resolution 07-28, Attachment B, p. 7), included in the 2009 State Strategy Status Report, and was a component of EPA's previous proposed approval of the 2007 State Strategy (citing 75 FR at ed. Reg. 74518, 74541 (November 30, 2011)), but is not included in the updated rulemaking schedule in 2011 Progress Report.

Response: EPA lists the 2009 State Strategy Status Report as one of five submittals that comprise the 2007 PM_{2.5} SIP for the SJV. See 76 FR 41338, 41340. We also state in section VI. (EPA's proposed Actions and Potential Consequences) that we were proposing to approve the SJV portions of CARB's 2007 State Strategy as revised in 2009 and 2011 addressing CAA and EPA

regulations for attainment of the 1997 PM_{2.5} NAAQS in the SJV. We specifically proposed to approve CARB's commitments to propose certain defined measures as listed in Table B-1 on page 1 of Appendix B of the 2011 Progress Report submittal based on CARB's own characterization of that submittal as its updates to its rulemaking schedule for the PM_{2.5} measures in the 2007 State Strategy. See 2011 Progress Report, p. 8, Table 1.

On June 20, 2011 CARB provided public notice of proposed revisions to the ozone portions of the 2007 State Strategy including revisions to the rulemaking schedule for in-use agricultural equipment. See CARB, Notice of Public Hearing to Consider a Status Report on the State Strategy for California's 2007 State Implementation Plan and Consider Approval of Proposed Revisions for the 8-Hour Ozone and Minor Technical Revisions to the PM_{2.5} SIP Transportation Conformity Budgets," June 20, 2011. As stated in the proposed revisions, CARB does not consider the in-use agricultural measures to be part of its PM_{2.5} control strategy and therefore did not include updates to the schedule for that measure in its PM_{2.5} SIP revision.⁴⁸ 2011 Ozone SIP Revisions, p. 3. These revisions were adopted by the Board on July 21, 2011, submitted to EPA on July 29, 2011 and proposed

⁴⁸ As discussed previously, CARB provided emissions reductions estimates for the in-use agricultural equipment measure only for 2017, which is three years after the 2014 attainment year for PM_{2.5}.

for approval by EPA on September 16, 2011 at 76 FR 57846. This proposed approval includes the revised schedule for the in-use agricultural equipment measure. See 76 FR at 57846, 57853.⁴⁹

Comment: AIR requests clarification from EPA on whether the omission of the proposed commitment in the 2011 Progress Report is an administrative error, or whether CARB intentionally removed that commitment from the 2007 State Strategy. AIR notes that based on CARB's website, it appears that the omission was in error, because CARB continues to represent to the public that it is working on the in-use agricultural equipment rule. AIR asserts that to the extent that CARB intentionally removed the commitment, such action violates 40 C.F.R. 51.102 because CARB did not provide adequate notice to the public of this fundamental change to CARB's strategy and that the public should not be expected to search through "voluminous SIP-related material, searching out stealth amendments by omission."

Response: As required by 40 CFR 51.102, CARB posted the draft 2011 Progress Report including the proposed revisions to the rulemaking schedule in the 2007 State Strategy 30 days prior to the public hearing and requested public comments. See CARB, Notice of Public Hearing to Consider the Approval of a Progress

⁴⁹ AIR notes that Table F-8 in EPA's 2011 Proposal TSD lists the agricultural equipment rule as a defined measure in the 2011 Progress Report. This was an error and has been corrected in the final TSD.

Report and Proposed State Implementation Plan Revisions for PM2.5, March 29, 2011. Questions and comments on the State's proposed revisions to its rulemaking schedule, including changes to the in-use agricultural equipment measure, should be directed to CARB during the State's public comment periods or at the public hearings.

Comment: AIR comments that the 2008 PM2.5 Plan and the 2007 State Strategy fail to demonstrate a monitoring program for CARB mobile source measures and the pesticide regulation, stating EPA regulations specifically require each plan to make this demonstration, citing 40 CFR 51.111. It provides as an example, CARB's anti-idling rules.

Response: EPA's regulation at 40 CFR 51.111 requires each plan include a description of enforcement methods including, but not limited to, procedures for monitoring compliance with each of the selected control measures and procedures for handling violations. These requirements apply to the control measures that are in the SIP. For the reasons discussed previously, we do not believe that California's mobile source measures that receive waivers under CAA section 209 need to be submitted for inclusion into the SIP; therefore, California need not include a description of the enforcement and or monitoring program for

these measures in its SIP.⁵⁰ As noted previously, CARB's anti-idling regulations are pending a section 209 waiver decision. Should any of these provisions need to be submitted for SIP approval, we will evaluate their monitoring procedures at the time we take action to incorporate them into the SIP. As we have also noted previously, the pesticide regulation is not part of the 2008 PM2.5 SIP's control strategy; therefore, the lack of any monitoring procedures is not material to our approval of this SIP.

As a practical matter, to be effective, monitoring procedures (which includes monitoring and recordkeeping requirements and testing procedures) must be tailored to the specific emission limitation for which they are to be used. For example, the procedures for monitoring NOx emissions from utility boilers are very different from the procedures for monitoring the VOC content of paints. Compare, for example, Rule 4601 (Boilers > 5 million BTU per hour), sections 5.4 "Monitoring Requirements" and 6.0 "Administrative Requirements" requiring continuous emissions monitoring and annual source testing using specific test procedures to Rule 4601 (Architectural Coatings), section 6.0 "Administrative

⁵⁰ For a description of CARB's source monitoring and enforcement programs including its procedures for handling violations, See <http://www.arb.ca.gov/enf/enf.htm>.

Requirements” specifying label requirements, requiring maintenance of annual sales records, and specifying test methods for determining the VOC content of coatings. Because of the need to tailor monitoring procedures to the emission limit, EPA evaluates a prohibitory rule’s monitoring, recordkeeping, and testing procedures at the time it reviews the rule for incorporation into the SIP. We note that we are not approving any rules or regulations as part of this specific action on the SJV 2008 PM_{2.5} SIP.

III. Approval Status of the Control Strategy Measures and Final Actions on the Attainment Demonstration and Enforceable Commitments

A. Approval Status of Control Strategy Measures

As part of its control strategy for attaining the PM_{2.5} standards in the SJV, the District made specific commitments to adopt thirteen measures on the schedule identified in the Plan. See 2008 PM_{2.5} Plan, Table 6-2 (revised June 17, 2010). The District has now completed its actions on all measures except for revisions to Rule 4905 (Natural Gas-Fired, Fan Type Residential Central Furnaces) which is not scheduled for adoption until 2014. See Table 1 below. As Table 1 shows, EPA has approved all of the adopted rules with the exception of

three, none of which is credited with emissions reductions in the demonstrations.

<p>Table 1 San Joaquin Valley Air Pollution Control District 2008 PM2.5 Plan Specific Rule Commitments</p>		
District Rule	Adoption Date	Current SIP Approval Status
4103 - Open Burning	April 2010	Final approval signed: September 30, 2011
4320 - Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr)	October 2008	Approved 75 FR 1715 (January 13, 2010)
4307 - Boilers, Steam Generators and Process Heaters (2 to 5 MMBtu/hr)	October 2008	Approved 76 FR 5276 (January 31, 2011)
4308 - Boilers, Steam Generators and Process Heaters (0.075 to < 2 MM Btu/hr)	December 2009	Approved 76 FR 16696 (March 25, 2011)
4703 - Stationary Gas Turbines	September 2007	Approved 74 FR 53888 (October 21, 2009)
4702 - Reciprocating Internal Combustion Engines	August 2011	Submittal pending
4354 - Glass Melting Furnaces	October 2008	Approved 76 FR 37044 (June 24, 2011)
4902 - Residential Water Heaters	March 2009	Approved. 75 FR 24408 (May 5, 2010)
4905 - Natural Gas-Fired, Fan Type Residential Central Furnaces	Adoption scheduled for 2014	Most current revision of rule approved: October 20, 2005 at 72 FR 29886 (May 30, 2007)
4901 - Wood Burning Fireplaces and Wood Burning Heaters	October 2008	Approved 74 FR 57907 (November 10, 2009)
4692 - Commercial Charbroiling	September 2009	Final approval signed: September 30, 2011
4311 - Flares	June 2009	Proposed for approval 76 FR 52623 August 23, 2011)
9410 - Employer Based Trip Reduction Program	December 2009	Action pending. Emissions reductions from this rule revision are not currently included in the attainment or RFP demonstration.

As part of its control strategy for attaining the PM_{2.5} standards in the SJV, CARB committed to propose certain measures on the schedule identified in the 2007 State Strategy. These commitments, which were updated in the 2011 Progress Report, and their current approval status are shown in Table 2. Of the measures listed in the 2007 State Strategy's updated rulemaking schedule, we note that only reductions from the "SmogCheck Improvement," "Cleaner In-Use Heavy Duty Trucks," and "Cleaner In-Use Off-Road Engines" measures are currently credited with reductions in the attainment demonstration. See 76 FR 41338, 41346 (Table 6).

Generally speaking, EPA will approve a State plan that takes emissions reduction credit for a control measure only where EPA has approved the measure as part of the SIP, or in the case of certain on-road and nonroad measures, where EPA has issued the related waiver of preemption or authorization under CAA section 209(b) or section 209(e). In our July 2011 proposed rule, in calculating and proposing to approve the State's aggregate emissions reductions commitment in connection with our proposed approval of the attainment demonstration, we assumed that full final approval, waiver, or authorization of a number of CARB rules would occur prior to our final action on the San Joaquin Valley PM_{2.5} Plan. See 76 FR 41338, 41346 (table 6). Two

specific CARB rules on which the attainment demonstration relies include the Truck Rule and the Drayage Truck Rule (that collectively are included in a State measure referred to as "Cleaner In-Use Heavy Duty Trucks"). We proposed approval of both rules at 76 FR 40652 (July 11, 2011), but will be unable to take final action on the rules until after taking final action on the SJV 2008 PM_{2.5} SIP because, while CARB has adopted the rules, the rules cannot take effect until approved by the California Office of Administrative Law (OAL) and such approval will not happen before EPA's final action must be taken on the plan.

We are nonetheless allowing the plan's attainment demonstration, and our final approval of it, to rely on the emissions reductions from the two CARB rules cited above for the following reasons:

- Both rules have been adopted by CARB and submitted to EPA as a revision to the California SIP,⁵¹ and the adopted versions are essentially the same as those for which EPA proposed approval;
- The comments that we have received on our proposed approval of the two CARB rules (Truck Rule and Drayage Truck Rule)

⁵¹ The Truck Rule and the Drayage Truck Rule were included in a SIP submittal dated September 21, 2011. We have included the September 21, 2011 SIP submittal in the docket for this rulemaking.

contend that the rules are costly and may not be economically or technologically feasible, but such considerations cannot form the basis for EPA disapproval of a rule submitted by a state as part of the SIP [see *Union Electric Company v. EPA*, 427 U.S. 246, 265 (1976)];

- The remaining administrative process, which involves review of the final adopted rules by California's Office of Administrative Law (OAL) is essentially procedural in nature, and should be completed over the near term;⁵²
- CARB intends to submit the final, effective rules to EPA as soon as OAL completes its review and approves the rules.

Therefore, we are confident that the final action on the rules will be completed in the near-term and that, as a result, continued reliance by the SJV 2008 PM2.5 SIP, and our final approval of it, on the emissions reductions associated with the rules is reasonable and appropriate. If, however, California does not submit the adopted and fully effective rules to EPA as a SIP revision prior to the effective date of today's action, we

⁵² See letter from James N. Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region IX, dated September 21, 2011, submitting the Truck and Drayage Truck rules SIP revision to EPA. CARB indicates that the Drayage Truck Rule will be submitted to OAL no later than September 23, 2011, and the Truck Rule will be submitted to OAL no later than October 29, 2011. Under California law, OAL must taken action within 30 working days.

will take appropriate remedial action to ensure that our action on the plan is fully supportable or to reconsider that action.

Table 2 2007 State Strategy Defined Measures Schedule for Consideration and Current Status			
State Measures	Expected Action Year	Implemen- tation	Current Status
Smog Check Improvements	2007-2009	2008-2010, 2013	Elements approved 75 FR 38023 (July 1, 2010) ⁵³
Expanded Vehicle Retirement (AB 118)	2007	2009	Adopted by CARB, June 2009; by BAR, September 2010.
Modification to Reformulated Gasoline Program	2007	2010	Approved, 75 FR 26653 (May 12, 2010)
Cleaner In-Use Heavy Duty Trucks	2007, 2008, 2010	2011-2015	Proposed for approval 76 FR 40642 (July 11, 2011)
Accelerated Introduction of Cleaner Locomotives	2008	2012	Prop 1B bond funds awarded to upgrade line-haul locomotive engines not already accounted for by enforceable agreements with the railroads. Those cleaner line-hauls will begin operation by 2012.
Cleaner In-Use Off-Road Engines	2007, 2010	2009	Waiver action pending.
New Emissions Standards for Recreational	2013	To be determined	Partial adoption, July 2008, Additional action expected 2013.

⁵³ California Assembly Bill 2289, passed in 2010, requires the Bureau of Automotive Repair to direct older vehicles to high performing auto technicians and test stations for inspection and certification effective 2013. Reductions shown for the SmogCheck program in the 2011 Progress Report do not include reductions from AB 2289 improvements. CARB Progress Report supplement, attachment 5.

Table 2 2007 State Strategy Defined Measures Schedule for Consideration and Current Status			
State Measures	Expected Action Year	Implemen- tation	Current Status
Boats			

Source: 2011 Progress Report, Table 1. Additional information from www.ca.arb.gov. Only defined measures with direct PM2.5 or NOx reductions in the SJV are shown here.

B. Enforceable Emissions Reductions Commitments

CARB's emissions reductions commitment is to achieve the "total emissions reductions necessary to attain Federal standards" through "the implementation of control measures; the expenditure of local, State, or federal incentive funds; or through other enforceable measures." See CARB Resolution 07-28, Attachment B at pp. 3-6; 2009 State Strategy Status Report, p. 20; and 2011 Progress Report, p. 6.

The updates and improvements to the inventories as presented in CARB's 2011 Progress Report altered the calculation of the reductions needed for attainment of the 1997 PM2.5 standards in SJV by reducing the total reductions needed from District and State control strategy measures to 9 tpd for PM2.5, 26.1 tpd for NOx, and 0.8 tpd for SO2. See Table 3 below and 76 FR at 41354, Table 7.

We are approving the 2008 PM2.5 Plan taking into account CARB's revisions to the control strategy based on the revisions to its projected baseline inventories and its enforceable

emissions reductions commitment. Specifically, we are interpreting CARB's emissions reductions commitment, together with the adjustments to the 2014 baseline inventories provided in CARB's 2011 SIP revision and the District's commitments, as adjusting CARB's total emissions reductions commitment such that CARB is now obligated to achieve 2.3 tpd of PM_{2.5} reductions and 17.1 tpd of NO_x reductions by 2014 through enforceable control measures to provide for attainment of the 1997 PM_{2.5} NAAQS in SJV. SJVUAPCD's commitments as submitted in 2008 are to achieve 9 tpd NO_x, 6.7 tpd direct PM_{2.5}, and 0.9 tpd SO_x by 2014. See Table 3 below. The commitment numbers in this table do not include reductions from measures already adopted by CARB and the District to meet their commitments.

Table 3 SJVUAPCD and CARB 2014 Emissions Reductions Commitments (tons per average annual day in 2014)				
		Direct PM _{2.5}	NO _x	SO ₂
A	Adjusted 2014 baseline emissions level ¹	72.3	317.3	25.4
B	2014 attainment target level ²	63.3	291.2	24.6
C	Reductions needed from control strategy measures (A-B)	9.0	26.1	0.8
D	District commitments ³	6.7	9.0	0.9
E	CARB commitments (C-D)	2.3	17.1	--

1. From TSD, Table G-1.

2. 2008 PM_{2.5} Plan, p. 9-3.

3. 2008 PM_{2.5} Plan, pp. 6-11 to 6-12.

The level of emissions reductions remaining as commitments after adjusting the baseline to reflect updates and improvements to the inventories and crediting reductions from SIP-approved or otherwise SIP-creditable measures is shown in Table 4. These levels remain unchanged from our 2011 proposal as does our conclusion that the attainment demonstration in the SJV 2008 PM2.5 SIP which relies in part on these enforceable commitments is approvable. See 76 FR 41338, 41354 (Table 8) and 41356.

Table 4 Reductions Needed for Attainment Remaining as Commitments based on SIP-Creditable Measures (tons per average annual day in 2014)				
		Direct PM2.5	NOx	SOx
A	Total reductions needed from baseline and control strategy measures and other adjustments to the baseline to attain	22.7	284.2	1.8
B	Reductions from baseline measures and adjustments to baseline	13.7	258.1	1.0
C	Total reductions from approved measures	6.0	13.2	3.6
D	Total reductions remaining as commitments (A-B-C)	3.0	12.9	0.0
E	Percent of total reductions needed remaining as commitments	13.2%	4.5%	0.0%

IV. Approval of the Motor Vehicle Emissions Budgets and Trading

Mechanism for Transportation Conformity

We noted in our July 2011 proposal that CARB had posted draft technical revisions to the SJV 2008 PM2.5 SIP's motor vehicle emissions budgets on June 20, 2011 (see 76 FR 41338, at 41360 and <http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm>) to correct data entry errors in the budget calculations and to remove the emissions reductions attributable to SJVUAPCD's Rule 9510 "Indirect Source Review."⁵⁴ In our July 2011 proposal, we proposed to approve these draft budgets contingent on our receiving the SIP submittal from CARB containing these budgets before our final action on the SJV 2008 PM2.5 SIP. The budgets were submitted by CARB as a SIP revision on July 29, 2011 (see letter, James Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region 9, dated July 29, 2011, with Attachments). We summarize the budgets we are approving today in Table 5 below. We posted the draft version of these budgets on our website for adequacy on July 14, 2011 for a 30-day comment period which ended on August 15, 2011 (see <http://www.epa.gov/otaq/stateresources/transconf/currrips.htm>).

⁵⁴ EPA has approved Rule 9510 into the California SIP but disallowed the use of emissions reductions from the rule for any SIP purpose including transportation conformity. See 75 FR 28509 (May 21, 2010) and 76 FR 26609 (May 9, 2011).

We received no comments on our adequacy posting and have completed our adequacy review. (see TSD, section II.J.).

EPA is also approving the trading mechanism in the State's submittal for use in transportation conformity analyses by the SJV MPOs as allowed for under 40 CFR 93.124. The trading applies only to:

- Analysis years after the 2014 attainment year.
- On-road mobile emission sources.
- Trades using vehicle NOx emission reductions in excess of those needed to meet the NOx budget.
- Trades in one direction from NOx to direct PM2.5.
- A trading ratio of 9 tpd NOx to 1 tpd PM2.5.

Clear documentation of the calculations used in the trade would be included in the conformity analysis. See 2011 Ozone SIP Revision, Appendix A, p. A-6.

Now that the approval of the budgets is finalized, the SJV MPOs and the U.S. Department of Transportation are required to use the revised budgets in transportation conformity determinations. Due to the formatting of the budgets (combining emissions changes, recession impacts and reductions from control measures), CARB will need to provide the MPOs with emissions reductions associated with the control measures incorporated into the budgets for the appropriate analysis years so that they

can include these reductions in future conformity determinations per 40 CFR 93.122. In addition, for these conformity determinations, the motor vehicle emissions from implementation of the transportation plan should be projected and compared to the budgets at the same level of accuracy as the budgets in the plan, for example emissions should be rounded to the nearest tenth (e.g. 0.1 tpd).

Table 5 PM2.5 MVEB for the San Joaquin Valley (tons per average annual day)				
County	2012		2014	
	PM2.5	NOx	PM2.5	NOx
Fresno	1.5	35.7	1.1	31.4
Kern (SJV)	1.9	48.9	1.2	43.8
Kings	0.4	10.5	0.3	9.3
Madera	0.4	9.2	0.3	8.1
Merced	0.8	19.7	0.6	17.4
San Joaquin	1.1	24.5	0.9	21.6
Stanislaus	0.7	16.7	0.6	14.6
Tulare	0.7	15.7	0.5	13.8

V. Final Actions and Resulting Clean Air Act Consequences

A. EPA's Final Actions

For the reasons discussed in our July 13, 2011 proposal, EPA approves, with the exception of the contingency measures provisions, California's SIP for attaining the 1997 PM2.5 NAAQS in the San Joaquin Valley and grants the State's request for an extension of the attainment date to April 5, 2015. The California PM2.5 attainment SIP for the San Joaquin Valley is composed of the SJVUAPCD's 2008 PM2.5 Plan as revised in 2010

and 2011 and the SJV-specific portions of CARB's 2007 State Strategy as revised in 2009 and 2011 that address CAA and EPA regulations for attainment of the 1997 PM_{2.5} NAAQS in the SJV.

Specifically, EPA approves under CAA section 110(k)(3) the following elements of the SJV PM_{2.5} attainment SIP:

1. the 2005 base year emissions inventories as meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008;

2. the reasonably available control measures/reasonably available control technology demonstration as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1010;

3. the reasonable further progress demonstration as meeting the requirements of CAA section 172(c)(2) and 40 CFR 51.1009;

4. the attainment demonstration and associated air quality modeling as meeting the requirements of CAA sections 172(c)(1) and (6) and 40 CFR 51.1007;

5. the 2012 RFP year and 2014 attainment year motor vehicle emissions budgets (as submitted on July 29, 2011) and CARB's trading mechanism to be used in transportation conformity analyses as allowed under 40 CFR 93.124;

6. SJVUAPCD's commitments to the adoption and implementation schedule for specific control measures listed in Table 6-2 (amended June 15, 2010) of the 2008 PM_{2.5} Plan to the extent that these commitments have not yet been fulfilled, and

to achieve specific aggregate emissions reductions of direct PM2.5, NOx and SOx by year, as listed in Table 6-3 of the PM2.5 Plan; and

7. CARB's commitments to propose certain defined measures, as listed in Table B-1 on page 1 of Appendix B of the 2011 Progress Report to the extent that these commitments have not yet been fulfilled and to achieve aggregate emissions reductions of 17.1 tpd NOx and 2.3 tpd direct PM2.5 by 2014 sufficient to provide for attainment of the 1997 PM2.5 NAAQS as described in CARB Resolution 07-28, Attachment B at pp. 3-6, the 2009 State Strategy Status Report, p. 21. and given in Table 3 above.

In addition, EPA concurs with the State's determination under 40 CFR 51.1002(c) that SOx and NOx are and VOC and ammonia are not attainment plan precursors for the attainment of the 1997 PM2.5 NAAQS in the SJV.

EPA also grants, pursuant to CAA section 172(a)(2)(A) and 40 CFR 51.1004(a), California's request to extend the attainment date for the San Joaquin Valley PM2.5 nonattainment area to April 5, 2015.

Finally, EPA disapproves under CAA section 110(k)(3) the contingency measures provisions of the SJV PM2.5 attainment SIP as failing to meet the requirements of CAA section 172(c)(9) and 40 CFR 51.1012.

B. CAA Consequences of the Final Disapproval of the Contingency Measure Provisions

EPA is committed to working with the District and CARB to resolve the remaining issues that make the current PM2.5 attainment SIP for the SJV not fully approvable under the CAA and the PM2.5 implementation rule.

Under the CAA, a final disapproval of a required CAA element, such as the contingency measures provisions in section 172(c)(9), triggers sanction clocks under CAA section 179(b) that run from the effective date of the final action. The first sanction, the offset sanction in CAA section 179(b)(2), will apply in the SJV PM2.5 nonattainment area 18 months from [insert date 60 days after publication in the Federal Register] The second sanction, highway funding sanctions in CAA section 179(b)(1), will apply in the area six months after the offset sanction is imposed. Neither sanction will be imposed under the CAA if California submits and we approve prior to the implementation of the sanctions, SIP revisions that correct the deficiencies identified in our proposed action. In addition to the sanctions, CAA section 110(c)(1) provides that EPA must promulgate a federal implementation plan addressing the deficient elements in the PM2.5 SIP for the SJV nonattainment area, two years after [insert date 60 days after publication in

the Federal Register], the effective date of this rule if we have not approved a SIP revision correcting the deficiencies within the two years.

Because we are approving the RFP and attainment demonstrations and the motor vehicle emissions budgets, we are issuing a protective finding under 40 CFR 93.120(a)(3) to the disapproval of the contingency measures. Without a protective finding, the final disapproval would result in a conformity freeze, under which only projects in the first four years of the most recent conforming Regional Transportation Plan and Transportation Improvement Programs can proceed. During a freeze, no new RTPs, TIPS or RTP/TIP amendments can be found to conform. See 40 CFR 93.120(a)(2). Under this protective finding, however, the final disapproval of the contingency measures does not result in a transportation conformity freeze in the San Joaquin PM2.5 nonattainment area.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order 12866, entitled "Regulatory Planning and Review."

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b).

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

This rule will not have a significant impact on a substantial number of small entities because SIP approvals and partial approvals/partial disapprovals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because this partial approval/partial disapproval action does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities.

Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of flexibility analysis would constitute Federal inquiry into the economic

reasonableness of State action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co., v. U.S. EPA*, 427 U.S. 246, 255-66 (1976); 42 U.S.C. 7410(a)(2).

D. Unfunded Mandates Reform Act

Under sections 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to the private sector, of \$100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the partial approval/partial disapproval action promulgated does not include a Federal mandate that may result in estimated costs of \$100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and

imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

E. Executive Order 13132, Federalism

Federalism (64 FR 43255, August 10, 1999) revokes and replaces Executive Orders 12612 (*Federalism*) and 12875 (*Enhancing the Intergovernmental Partnership*). Executive Order 13132 requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has

federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely approves a State rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

F. Executive Order 13175, Coordination with Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." This final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes,

or on the distribution of power and responsibilities between the Federal government and Indian tribes. Thus, Executive Order 13175 does not apply to this rule.

G. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This rule is not subject to Executive Order 13045, because it approves a State rule implementing a Federal standard.

H. Executive Order 13211, Actions that Significantly Affect Energy Supply, Distribution, or Use

This rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12 of the National Technology Transfer and Advancement Act (NTTAA) of 1995 requires Federal agencies to evaluate existing technical standards when developing a new regulation. To comply with NTTAA, EPA must consider and use

"voluntary consensus standards" (VCS) if available and applicable when developing programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical.

The EPA believes that VCS are inapplicable to this action. Today's action does not require the public to perform activities conducive to the use of VCS.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Population

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA lacks the discretionary authority to address environmental justice in this rulemaking. In reviewing SIP submissions, EPA's role is to approve or disapprove state choices, based on the criteria of the Clean Air Act. Accordingly, this action merely

approves certain State requirements for inclusion into the SIP under CAA section 110 and subchapter I, part D and disapproves others, and will not in-and-of itself create any new requirements. Accordingly, it does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. section 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. section 804(2). This rule will be

effective on [FEDERAL REGISTER OFFICE: insert date 60 days from date of publication of this document in the Federal Register].

L. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [FEDERAL REGISTER OFFICE: insert date 60 days from date of publication of this document in the Federal Register]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Sulfur oxides.

AUTHORITY: 42 U.S.C. 7401 *et seq.*

Dated: September 30, 2011 Jared Blumenfeld,
Regional Administrator,
EPA Region 9.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

PART 52-[AMENDED]

1. The authority citation for Part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 et seq.

Subpart F - California

2. Section 52.220, is amended by adding paragraph (c) (356) (ii) (B), adding and reserving paragraph (c) (391), and adding paragraphs (c) (392), (c) (393), (c) (394), (c) (395), and (c) (396).

§52.220 Identification of plan.

* * * *

(c) * * *

(356) * * *

(i) * * *

(ii) * * *

(B) State of California Air Resources Board.

(1) Proposed State Strategy for California's 2007 State Implementation Plan, adopted on September 27, 2007.

(2) CARB Resolution No. 07-28 with Attachments A and B, September 27, 2007. Commitment to achieve the total emissions reductions necessary to attain the Federal standards in the SJV air basin, which represent 2.3 tons per day (tpd) of direct PM2.5 and 17.1 tpd of nitrogen oxides by 2014 for purposes of the 1997 PM2.5 NAAQS, as described in Resolution No. 07-28 at Attachment B, pp. 3-6, and modified by CARB Resolution No. 09-34 (April 24, 2009) adopting "Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revisions to the SIP Reflecting Implementation of the 2007 State Strategy" and by CARB Resolution No. 11-24 (April 28, 2011) adopting the "Progress Report on Implementation of

PM_{2.5} State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions."

(3) Executive Order S-07-002, Relating to Approval of the State Strategy for California's State Implementation Plan (SIP) for the Federal 8-Hour Ozone and PM_{2.5} Standards, November 16, 2007.

(391) [Reserved]

(392) A plan was submitted on June 30, 2008 by the Governor's designee.

(i) [Reserved]

(ii) Additional Material.

(A) San Joaquin Valley Unified Air Pollution Control District.

(1) 2008 PM_{2.5} Plan, adopted on April 30, 2008.

(2) SJVUAPCD Governing Board, In the Matter of: Adopting the San Joaquin Valley Unified Air Pollution Control District 2008 PM_{2.5} Plan, Resolution No. 08-04-10, April 30, 2008. Commitments to achieve emissions reductions (including emissions reductions of 8.97 tpd of NO_x, 6.7 tpd of direct PM_{2.5}, and 0.92 tpd of SO_x by 2014) as described in Table 6-3a (p. 6-11), Table 6-3b (p. 6-12), and Table 6-3c (p. 6-12) respectively of the 2008 PM_{2.5} Plan and commitments to adopt and submit control measures as described in Table 6-2 (p. 6-9) of the 2008 PM_{2.5} Plan, as amended June 17, 2010.

(B) State of California Air Resources Board.

(1) CARB Resolution No. 08-28 with Attachment A, May 22, 2008.

(393) An amended plan was submitted on August 12, 2009 by the Governor's designee.

(i) [Reserved]

(ii) Additional Material.

(A) State of California Air Resources Board.

(1) Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revisions to the SIP Reflecting Implementation of the 2007 State Strategy, pages 11-17, April 24, 2009.

(2) CARB Resolution No. 09-34, April 24, 2009.

(394) An amended plan was submitted on September 15, 2010 by the Governor's designee.

(i) [Reserved]

(ii) Additional Material.

(A) San Joaquin Valley Unified Air Pollution Control District.

(1) 2008 PM_{2.5} Plan Amendment to Extend the Rule 4905 Amendment Schedule, June 17, 2010.

(2) SJVUAPCD Governing Board, In the Matter of: Proposed Amendments to the 2008 PM_{2.5} Plan to Extend the Rule Amendment Schedule for Rule 4905 (Natural Gas-Fired, Fan-Type Residential Central Furnaces), Resolution 10-06-18, June 17, 2010.

(B) State of California Air Resources Board.

(1) Executive Order S-10-003, Relating to Approval of Amendments to the 2008 PM_{2.5} Plan to Extend the Rule Amendment Schedule for Rule 4905 (Natural Gas-Fired, Fan-Type Residential Central Furnaces), September 15, 2010.

(395) An amended plan was submitted on May 18, 2011 by the Governor's designee.

(i) [Reserved]

(ii) Additional Material.

(A) State of California Air Resources Board.

(1) Progress Report on Implementation of PM_{2.5} State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions, Release Date: March 29, 2011.

(2) CARB Resolution No. 11-24, April 28, 2011. Commitment to propose measures as described in Appendix B of the Progress Report on the Implementation of PM_{2.5} State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions.

(3) Executive Order S-11-010, "Approval of Revisions to the Fine Particulate Matter State Implementation Plans for the South Coast Air Quality Management Plans for the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District," May 18, 2011.

(396) An amended plan was submitted on July 29, 2011 by the Governor's designee.

(i) [Reserved]

(ii) Additional Material.

(A) State of California Air Resources Board.

(1) 8-Hour Ozone State Implementation Plan Revisions and Technical Revisions to the PM_{2.5} State Implementation Plan Transportation Conformity Budgets for the South Coast and San Joaquin Valley Air Basins, Appendix A, page A-6, (dated June 20, 2011), adopted July 21, 2011.

(2) CARB Resolution No. 11-22, July 21, 2011.

(3) Executive Order S-11-016, "Approval of Revisions to the 8-Hour Ozone State Implementation Plans for the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District," July 29, 2011.

[FR Doc. 2011-27232 Filed 11/08/2011 at 8:45 am; Publication Date: 11/09/2011]